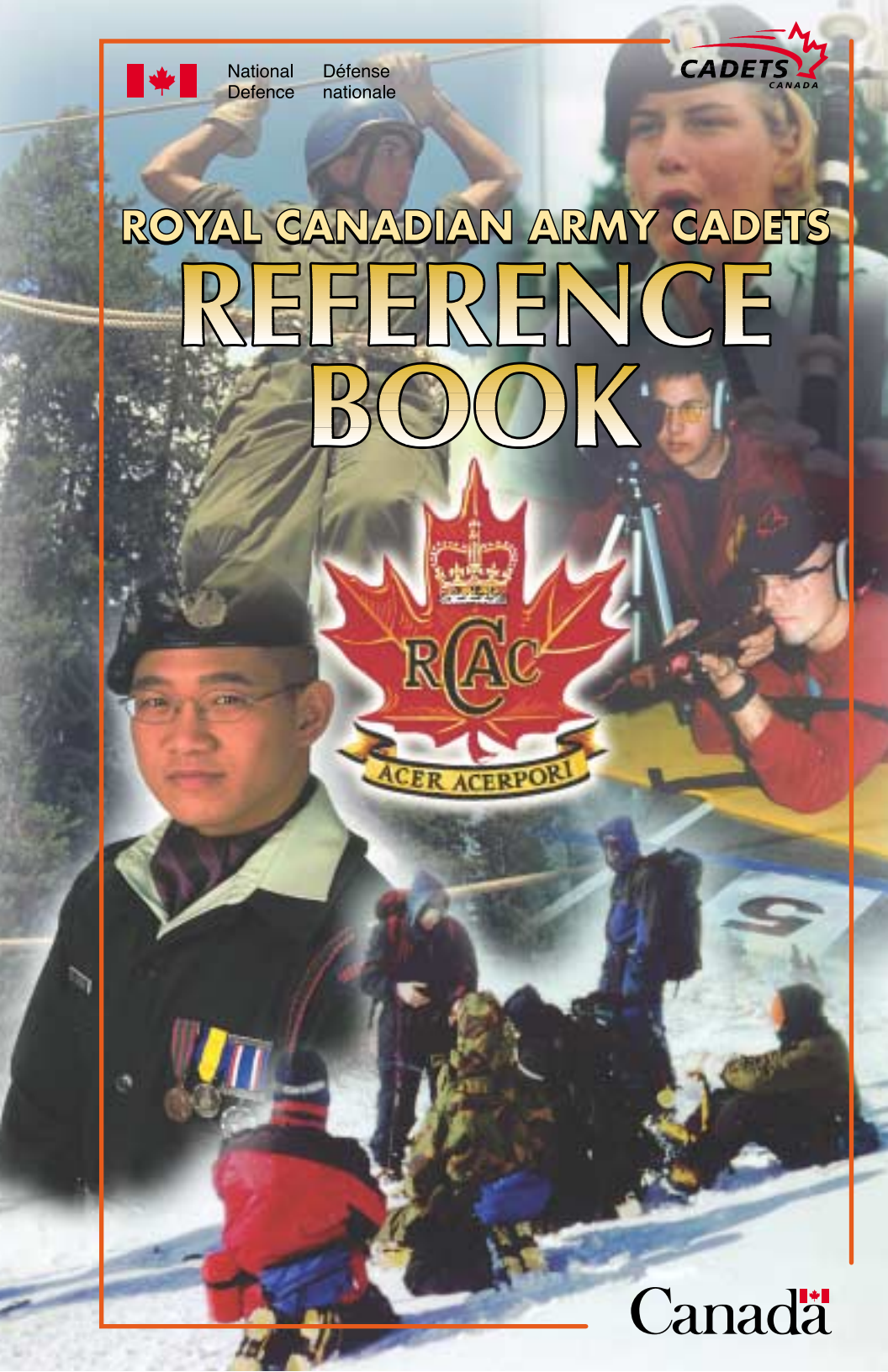
National Defence / Défense nationale

CADETS CANADA

ROYAL CANADIAN ARMY CADETS

REFERENCE BOOK



Canada

National Défense
Defence nationale

A-CR-CCP-121/PT-001



Royal Canadian Army Cadets
Cadet Reference Book

Issued on authority of the Chief of Defence Staff

(This publication supercedes A-CR-CCP-121/PT-001 dated 1990-09-01)

OPI: D Cdts 3 **2001-03-01**

Canada

CADETS CANADA

RIGHTS	RESPONSIBILITIES
As a cadet I have the **right** to: • Be treated fairly and with respect • Belong • Feel safe • Be included • Learn • Seek help • Be heard • Make decisions • Be protected from emotional, physical, and sexual abuse and all forms of harassment • Use the law • Say "NO" to unwelcome behaviour	As a cadet I have the **responsibility** to: • Treat others with respect • Not exclude anyone • Help protect others • Respect personal boundaries: honour "No's" • Tell the truth • Listen • Not to dominate others • Not to misuse my power • Control my anger • Not to harass anyone • Not abuse anyone • Get help if I need it

KIDS HELP PHONE 1-800-668-6868

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FOREWORD

This book contains the requisite knowledge of an instructor in the Royal Canadian Army Cadet Mandatory (Star) Program. It can be used as a study guide for the National Star Certification Exam, in conjunction with the Course Training Plans (CTP) and the NSCE study guide.

This book is a reference book and does not supersede published policies, including Cadet Administration and Training Orders.

Instructors preparing a lesson should refer to the appropriate CTP for the respective class description, then refer to the information in this book for content. An Instructor’s Guide is also available to support training.

Army cadet training is not designed as a self-instruction package or a home study program. These courses require group work and an instructor's guidance for completion. Each Gold Star course cadet is to be issued this reference book; it is theirs to keep. They may add their own notes and highlight important paragraphs as they wish. Blank note pages are provided at the end of each chapter.

Never stop learning.


Drill
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PO 401 DRILL

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INTRODUCTION

Military drill was originally developed for moving infantry on the battlefield. Troops often had to change flank in order to meet a new attack, form a compact square to repel the cavalry or to extend into line ready for the advance. They had to do these movements both rapidly and efficiently if they wanted to stay alive. If the troops practiced these movements beforehand on the parade square, they could perform them reasonably well in the stress, noise, and confusion of the battlefield.

The need for drill as a part of actual warfare has long since disappeared. Drill's other values, however, remain as important as ever, especially in a Cadet Corps. There is no better way of developing sharpness, team spirit (esprit de corps), teamwork and physical coordination, all important elements in army cadets. Good drill, closely supervised and well executed, is an exercise in obedience and alertness. It sets the standard for the individual and the Cadet Corps.

The various drill movements appear in the Canadian Forces Manual of Drill and Ceremonial (A-PD-201-000/PT-000).

WORDS OF COMMAND

Good drill depends on properly delivered words of command. They are to be pronounced clearly and distinctly, with confidence and determination, as they express an order that is to be promptly obeyed.

Words of command are divided into:

a. cautionary commands; and,
b. executive commands.

The cautionary command serves as a warning for the movement to be performed and will be given preceding the executive command. The cautionary command may include advance, retire, etc. The executive command, serves as a signal for the movement to be carried out.

Throughout this book words of command are printed in CAPITAL LETTERS. A hyphen separates the cautionary from the executive, e.g. "RIGHT IN – CLINE".

As a guide, the cautionary command should be given out over two paces. The interval between the cautionary and executive command should also

be two paces. Although it is not always possible to give exactly the same pause between the cautionary and executive commands, the pause should be as consistent as possible.

The executive command is given as the foot specified in the following table is forward and on the ground, unless otherwise indicated:

Words of Command	**Foot**
HALT	Left
STEP OUT or STEP SHORT	Left
MARK TIME (when marching)	Right
FORWARD	Left
ABOUT TURN	Right
RIGHT TURN, RIGHT INCLINE, RIGHT FORM or ON THE RIGHT FORM SQUAD	Left
LEFT TURN, LEFT INCLINE, LEFT FORM or ON THE LEFT FORM SQUAD	Right
CHANGE STEP	Right
SALUTE (on the march)	Left
EYES RIGHT (front)	Left
FORM SINGLE FILE (on the march)	Right
REFORM SINGLE FILE (on the march)	Right

DIRECTING FLANK

The directing flank is that flank from which the dressing is taken unless the directing flank is changed for a special movement. The directing flank is always:

a. when advancing in line, the right flank;
b. when retiring in line, the left flank; and,
c. when in threes, the original front rank, eg when moving to the right flank, the dressing is by the left or when moving to the left flank, the dressing is by the right.

INSPECTION

When a cadet corps is inspected, it will be at the open order. On the completion of the inspection it may be returned to the close order.

A cadet corps will be dressed after the open order and may be dressed after the close order.

The inspecting officer or cadet is to inspect the front and back of each rank, commencing at the right flank of the front rank and proceeding in an anti-clockwise direction around each rank in turn. A supernumerary rank normally should not be inspected.

If a band is in attendance it may be inspected.

Each rank is inspected in the position of attention. Ranks not under inspection at the time may be ordered to stand at ease. Similarly, during the inspection of one unit or sub-unit, another unit or sub-unit not under inspection at the time may be ordered to stand at ease.

If when being inspected a cadet is ordered to adjust clothing or equipment, the cadet will do so immediately, maintaining position within the ranks. On completion of the order, the cadet will assume the position of attention.

The inspection of a cadet is to commence at the cadet's head and work down to the cadet's feet to ascertain that:

a. the cadet's hair is cut to the correct length;
b. the cadet's clothing and footwear are clean and in good repair; and,
c. the correct articles of clothing, badges of rank, medals, etc, are worn in accordance with regulations and orders.

EO 401.01: ADOPT THE POSITIONS OF ATTENTION, STAND AT EASE, AND STAND EASY

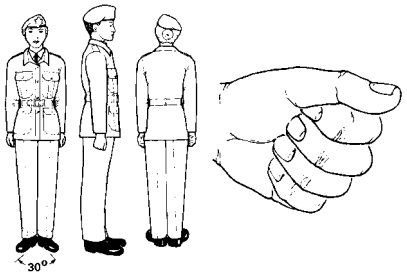
ATTENTION

The position of attention is one of readiness in expectation of a word of command. Exactness in this position is important, as the position is adopted by officers and cadets when addressing a superior. The position of attention is as follows:

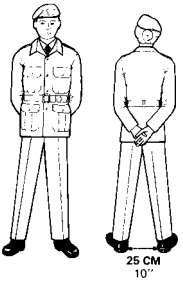
a. heels together and in line;
b. feet turned out to form an angle of 30 degrees;
c. body balanced and the weight evenly distributed on both feet;
d. shoulders level, square to the front;
e. arms hanging as straight as their natural bend will allow with elbows and wrists touching the body;
f. wrists straight, the back of the hands held outwards;
g. the fingers aligned, touching the palm of the hand, thumbs placed on the side of the forefinger at the middle joint with the thumbs and back of the fingers touching the thighs lightly and the thumbs in line with the seam of the trousers;
h. head held erect, neck touching the back of the collar, eyes looking straight to the front; and,
i. muscles should not be tense, merely held in position.

STAND AT EASE

The stand at ease is an intermediate position between attention and stand easy. It allows no movement, but can be maintained, without strain, for a longer time than the position of attention.



Attention (clenched hand)

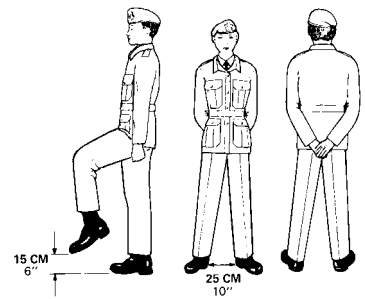


At Ease

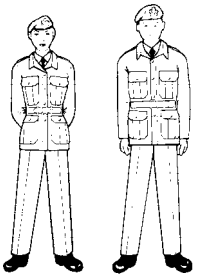
On the command "STAND-AT-EASE" you will:

a. bend your left knee, carry your left foot to the left, straightening it in double time, and smartly placing your foot flat on the ground, with the insides of your heels 25 cm (10 in.) apart;
b. at the same time, with a quick motion, bring your arms behind your back, stretched to their full extent, and place the back of your right hand in the palm of your left, with thumbs crossed right over left, the fingers together and extended; and,
c. balance your body with your weight evenly distributed on both feet.

You will notice the term "bend the left (right) knee" is used throughout this chapter and in the drill chapters of the other manuals. The term means to bend your knee so your foot will hang at its natural angle with toe pointed downwards 15 cm (6 in.) off the ground and directly underneath the knee.



Attention to At Ease



Easy

STAND EASY

The position of stand easy is ordered when it is time for the squad to relax. This command is only given when the squad is in the position of stand at ease. On the command, "STAND-EASY", you will:

a. close your hands and bring your arms to the position of attention;
b. observe a standard pause; and,
c. relax (you may adjust clothing and equipment, but you cannot move your feet or talk).

STAND AT EASE FROM STAND EASY

On the command, "SQUAD" you will assume the position of stand at ease.

ATTENTION FROM STAND AT EASE

On the command, "ATTENTION" you will:

a. bend your left knee and straighten your left leg in double time, placing your left foot smartly beside the right, in the position of attention, toe touching the ground first, followed by the heel, with heels aligned; and,
b. at the same time, with a quick motion, bring your arms and hands to the position of attention.

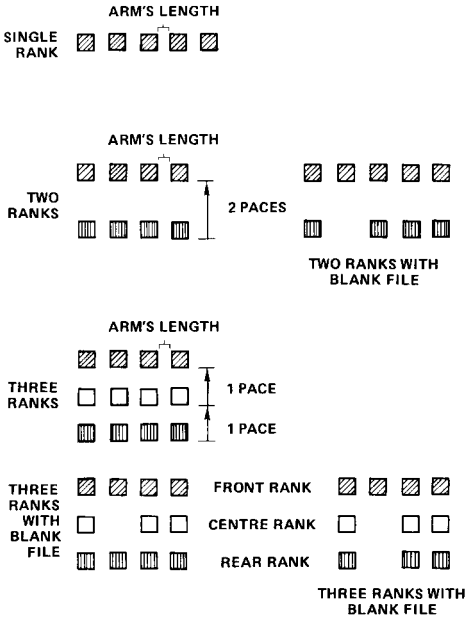
EO 401.02: FORM A SQUAD AND RESPOND TO ROLL CALL

FORMATION OF A SQUAD

Soon after arrival at the Cadet Corps, new cadets will learn how to form a squad. These formations are essential to maintain control and ensure uniformity throughout training.

On the command, "FORM UP IN SINGLE (TWO OR THREE) RANK(S) MOVE", you will:

a. assume the position of attention;
b. observe the standard pause;
c. step off with the left foot, march forward towards the instructor; and,
d. the first cadet who approaches the instructor will halt three paces directly in front of him/her and the remainder will cover off the first cadet from front to rear and/or fall in on his/her left at arm's length intervals.



CALLING THE ROLL

On the command, "ATTENTION/ANSWER TO YOUR NAME/STAND AT-EASE" each squad member will come to attention as his/her name is called and answer in one of the following ways:

a. "Sir" or "Ma'am" if the person calling the roll is an officer, a chief warrant officer, or a master warrant officer;
b. "Warrant" when the roll is called by a warrant officer; and,
c. "Sergeant", "Master Corporal" or "Corporal" when the roll is called by a cadet holding one of these ranks.

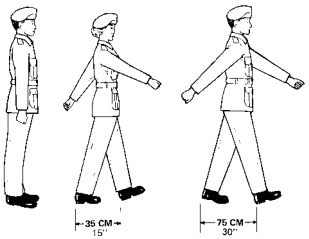
When the roll-call is supervised by a person senior in rank to the person calling the roll, you will answer to your name with the correct response for the rank of the supervisor. (For example, if a master warrant officer is present when the roll is called by a master corporal you will answer to your name with "Sir" or "Ma'am".)

EO 401.03: MARCH AND HALT IN QUICK TIME

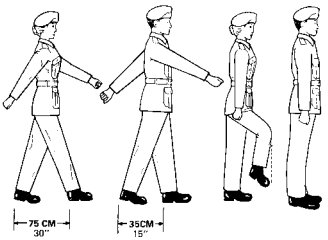
MARCHING IN QUICK TIME

When marching you will hold your body upright, keep your head and eyes to the front as it would and be in the position of attention. On the command, "BY THE RIGHT (LEFT OR CENTRE) QUICK MARCH", you will:

a. shoot your left foot forward in a 35 cm (15 in.) pace, toe up;
b. strike the heel on the ground first and keep the toe pointed directly forward;
c. at the same time, swing your right arm straight forward and your left arm straight to the rear, waist high;
d. continue marching with paces of 75 cm (30 in.) each;
e. bring your legs forward successively in a straight line; and,
f. swing your arms forward successively in a straight line from your shoulder, front to rear, with hands closed as in the position of attention.



Quick march



Halt

HALTING IN QUICK TIME

On the command, "SQUAD HALT", you will:

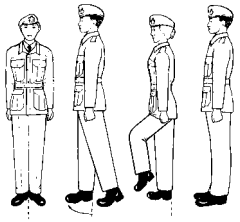
a. check your forward movement by placing your right foot on the ground using the heel as a brake;
b. swing your left arm forward and your right arm to the rear;
c. take a 35 cm (15 in.) pace with your left foot, placing it flat on the ground;
d. swing your right arm forward and your left to the rear;
e. bend your right knee, straightening it in double time; and,
f. at the same time, cut your arms to your sides as quickly as possible and assume the position of attention.

The timing for the halt is called as "one, one two."

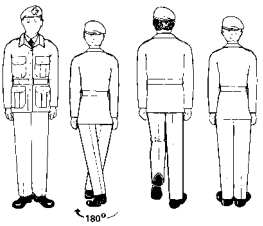
EO 401.04: EXECUTE TURNS AT THE HALT

Turns and inclines are performed to change direction, right or left turns by 90 degrees, about turn 180 degrees, and right and left inclines 45 degrees.

On the command, “RIGHT TURN”, you will keep both knees braced, arms at your sides, maintain your body upright, and turn 90 degrees to the right by pivoting on the right heel and left toe. On the completion of this part of the movement, the weight of your body is placed on the right foot, and your left leg is braced with the heel off the ground. To perform the second part of the movement you bend your left knee, straighten it in double time, and place your left foot by your right smartly to assume the position of attention. The standard pause is observed between the two parts of the movement.



Right turn



About turn

On the command, “ABOUT TURN”, the drill as described on the right turn is followed except that the pivot to the right is made through 180 degrees. Balance is maintained by bracing your legs and locking the thighs together.

On the command, “LEFT TURN”, the drill as described in the right turn is followed except that the details of moving your feet and direction are reversed.

On the command, “LEFT IN-CLINE”, the drill as described in turning to the left is followed but the turn is only made through 45 degrees. On the command, “RIGHT IN-CLINE”, the drill as described in turning to the right is followed but the turn is only made through 45 degrees.

EO 401.05: EXECUTE PACES FORWARD AND TO THE REAR

When taking paces forward and to the rear:

a. the cadence will be in quick time; and,
b. the arms will be kept still at the sides.

On the command, "ONE PACE FORWARD – MARCH", squad members will:

a. shoot the left foot forward in a 35 cm (15 in.) pace, forcing the weight forward on the left foot, with the right heel raised;
b. keep the arms still at the sides; and,
c. bend the right knee, straighten it in double time, place the right foot smartly on the ground beside the left, and assume the position of attention.

On the command, "ONE PACE STEP BACK – MARCH", squad members will:

a. shoot the left foot to the rear a 35 cm (15 in.) pace, with the weight forward on the right foot, with the left heel raised;
b. keep the arms still at the sides; and,
c. bend the right knee, straighten it in double time, place the right foot smartly on the ground beside the left, and assume the position of attention.

The timing for the above movements is counted as follows:

a. for one pace, “one-two;” and,
b. for more than one pace, “one-two, two-two, three-two…” etc.

Paces right [left] close march will not be ordered when the distance required to move exceeds eight paces. When the distance is greater, the squad will be turned and marched the required distance. On the command, "ONE PACE RIGHT [LEFT] CLOSE – MARCH" or “TWO PACES [THREE]…” etc., squad members will bend the right knee, carry the foot to the right and place it smartly on the ground with the inside of the heels 25 cm apart; then bend the left knee, and place the foot smartly by the right to assume the position of attention. Repeat, using the timing for paces forward and rear.

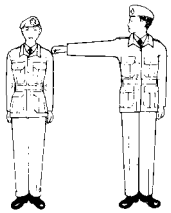
EO 401.06: EXECUTE THE MOVEMENTS REQUIRED FOR RIGHT DRESS

A squad is dressed so that it looks sharp and well ordered. Dressing ensures that there is proper spacing between members from front to rear and side to side. Two orders are used to accomplish the dressing of a squad. The first is “RIGHT DRESS”, which is done in three movements, with the standard pause between each movement. The second command is “EYES FRONT”, which is one movement.

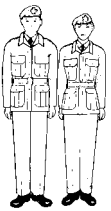
On the command, “RIGHT DRESS”,

a. the right-hand cadet of the front rank stands fast;
b. the remainder take a 35 cm (15 in.) pace forward by shooting the left foot forward, bending the right knee, and adopting the position of attention;
c. observe the standard pause;
d. the right file of cadets stands fast;
e. the remainder turn head and eyes to the right as far as possible without straining;
f. at the same time, the front rank, except the right-hand cadet, shoots the right arm to its full extent behind the shoulder of the cadet on his/her right. The hand is closed as in the position of attention, back of the hand facing up and the right arm parallel to the ground;
g. observe the standard pause;
h. the right-hand cadet of the front rank stands fast; and,
i. the remainder take up correct alignment, distance and covering by taking short quick paces until they are in the correct position. Movement starts with the left foot.

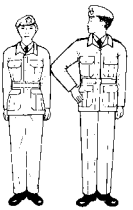
As a guide to taking up correct alignment, each cadet in the squad, except the right-hand cadet, moves to a position from which he/she can just see the lower portion of the face of the second cadet to his/her right. Correct covering is taken up by glancing to the front without moving the head. The interval is correct when the closed hand is touching the left shoulder of the cadet on the right.



Right dress



Shoulder dressing



Elbow dressing

On the command, "EYES FRONT", you will snap your head and eyes to the front and cut the right arm smartly to the position of attention, without slapping the thigh.

SHOULDER DRESSING AND ELBOW DRESSING

On the command, "SHOULDER DRESSING, RIGHT – DRESS", dressing is carried out as for the Right Dress, except the arms are not raised and dressing is taken up without an arm's length interval

On the command, "ELBOW DRESSING, RIGHT – DRESS", dressing is carried out as for the Right Dress except:

a. the right hand is placed on the hip, with fingers closed, pointed down and extended forward and thumbs to the rear;
b. elbow straight out to the side; and,
c. the point of the elbow touching the cadet on the right.

DRESS TO THE LEFT

At times a squad may be commanded to dress to the left. In such cases the same drill is followed as for right dress, except the head and eyes are turned left and the left arm is raised. The left-hand cadet stands fast.

NOTE

When the Platoon 2 I/C dresses a rank and finds a cadet out of alignment, the Platoon 2 I/C will tell that cadet to either move forward or back. The cadet, upon being told to adjust position, will shuffle and pick up the dressing in double quick time.

EO 401.07: SALUTE WITH THE HAND AT THE HALT

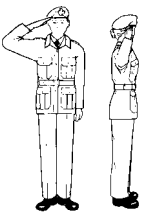
SALUTE TO THE FRONT

The salute is given with the right hand. When a cadet is unable to salute, compliments will be paid by turning the head and eyes to the left or right or standing to attention, as appropriate.

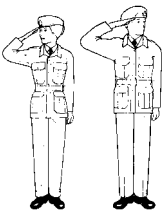
The salute is performed in two movements; up and down. On the command, "TO THE FRONT – SALUTE", you will;

a. bend your right elbow and open the palm of your right hand; and,
b. force your right hand by its shortest route to the outside edge of the eyebrow so that:
 (1) the palm of the hand is facing down;
 (2) the thumb and fingers are fully extended and close together;
 (3) the tip of the second finger is just touching the outside of your right eyebrow;
 (4) the hand, wrist and forearm are in a straight line;
 (5) the elbow is in line with the shoulders; and,
 (6) the upper arm is parallel to the ground.

These steps complete the upward movement of the salute. The salute is held for the standard pause. The downward movement is then executed by bringing your hand sharply to the position of attention by the shortest route, without slapping the thigh. The hand is closed after the forearm is lowered below shoulder level.



To the front



To the right or left

SALUTING TO THE RIGHT AND LEFT

At times it is desirable to salute to the left or right. When you are given the command "TO THE RIGHT (or LEFT) – SALUTE", the salute will be executed as explained for the Salute to the Front, except that:

a. your head and eyes will be turned smartly to the right (left) as far as possible without straining;
b. when saluting to the left, your right hand, wrist, and arm, are brought further over to the left to the correct position in line with the outside edge of the right eyebrow; and,
c. when saluting to the right, your arm is moved to the rear. The tip of the second finger remains in line with the outside edge of the right eyebrow.

After observing the standard pause, your hand is brought sharply to the position of attention; at the same time your head and eyes are turned smartly to the front.

EO 401.08: SALUTE ON THE MARCH

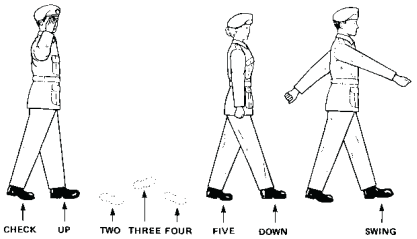
The movements of the salute to the front and to the left or right were described in the previous lesson and are the same for saluting at the halt.

When a cadet salutes on the march, he/she will commence the salute five paces before reaching an officer, look directly into the officer's eyes by turning his/her head in the required direction on the commencement of the salute, and complete the salute one pace beyond him/her. This permits the officer to return the salute before the cadet has passed.

On the command, "TO THE FRONT (LEFT or RIGHT) – SALUTE", you will:

a. complete a 75 cm (30 in.) pace with your right foot;
b. swing your left arm forward and your right arm to the rear;
c. complete a 75 cm (30 in.) pace with your left foot;
d. cut your left arm to the side;
e. bring your right arm to the side, executing the salute in one continuous movement. While saluting, the head is turned right (left) as far as possible without straining;
f. complete four 75 cm (30 in.) paces in quick time, ending with your left foot forward;

g. complete a 75 cm (30 in.) pace with your right foot;
h. cut your right arm to the side; and,
j. continue marching.



EO 401.09: EXECUTE THE OPEN AND CLOSE ORDER MARCH

OPEN ORDER MARCH

To execute the open order the following movements are carried out:

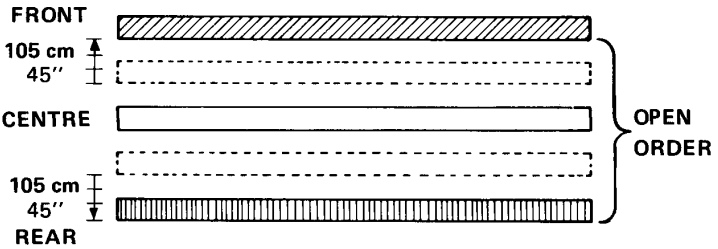
a. the front rank will step forward three 35 cm (15 in.) paces, the rear rank will step back three 35 cm (15 in.) paces, and the centre rank will stand fast;
b. the cadence will be in quick time; and,
c. the arms will be kept still at the sides.

On the command, "OPEN ORDER – MARCH", the movements will be executed as for three paces forward and to the rear. The final movement being executed by bending the right knee, straightening it in double time, and placing the right foot smartly on the ground by the left and assuming the position of attention.

The timing for this movement is counted one, one, one-two.

CLOSE ORDER MARCH

On the command, "CLOSE ORDER – MARCH", the squad will act in the reverse of the action for the open order.



EO 401.10: EXECUTE THE MOVEMENTS FOR DISMISSAL

The command "DIS – MISS" signifies the end of a parade, period of instruction, etc. The squad will be in one, two or three ranks and at attention when dismissed. On the command, "DIS – MISS", squad members will:

a. turn right;
b. observe the standard pause;
c. salute, if an officer is on parade;
d. observe the standard pause; and,
e. march at attention independently, in quick time, from the place of parade.

EO 401.11: STEP OUT, STEP SHORT AND WHEEL IN QUICK TIME

STEPPING OUT AND STEPPING SHORT

Stepping out is used to increase the distance to be covered without altering the cadence. Stepping short is used to decrease the distance to be covered without altering the cadence. On the command, "STEP – OUT":

a. the pace will be lengthened by 10 cm (3 in.) on the next left foot;
b. the squad will continue to step out until the command, "QUICK – MARCH", is ordered; and,
c. this gives a length of pace equal to 85 cm (33 in.).

On the command, "QUICK MARCH", the pace is shortened by 10 cm (3 in.) on the next left foot. On the command, "STEP – SHORT",

a. the pace will be shortened by 20 cm (9 in.) on the next left foot;
b. the squad will continue to step short until the command, "QUICK – MARCH", is ordered; and,
c. this gives a length equal to 55 cm (21 in.).

On the command, "QUICK – MARCH", the pace is lengthened by 20 cm (9 in.) on the next left foot.

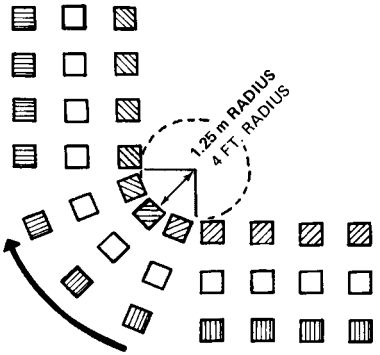
WHEELING

Wheeling is the term used for the action of changing direction without using a left or right turn. On the command, "RIGHT – WHEEL", the leading file of three cadets wheels around one quarter of a circle, which changes their direction by 90 degrees. The radius of the circle is to be 1.25 m (4 ft). The inner flank of cadets will step short, and the outside flank of cadets will step out, without changing the speed (cadence) of their steps.

When the leading file has wheeled 90 degrees, it will march in the new direction, with the normal length of pace. When the wheel is completed, the direction from which the dressing is taken is indicated by the instructor, or supervisor, ordering "BY THE RIGHT (LEFT)".

If the squad is ordered to halt or mark time, and only part of the squad has completed the wheel, the squad will remain in this position unless the command, "REAR FILES – COVER", is ordered. On the command, "REAR FILES – COVER", the files at the rear cover off the files that are facing the new direction.

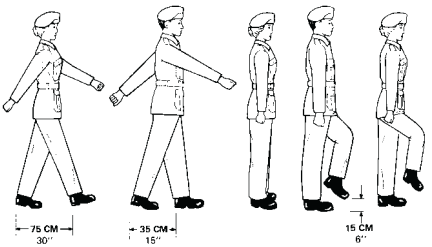
At times it may be desirable to wheel a squad less than 90 degrees. When this is the case, the command, "FOR – WARD", is ordered when the leading file is facing the required direction.



EO 401.12: MARK TIME, FORWARD AND HALT IN QUICK TIME

MARKING TIME IN QUICK TIME

Marking time in quick time is done at the same cadence as marching in quick time.



On the command, "MARK – TIME", you will:

a. take a 35 cm (15 in.) pace with your left foot, placing the foot flat on the ground;
b. bring your right foot in to the left in a straight-leg manner, not scraping the ground;
c. at the same time, cut your right arm down and your left in from the rear, and assume the position of attention;
d. bend your left knee;
e. place the toes on the ground before the heel as the leg is lowered; and,

f. continue to mark time until the command "FOR – WARD or HALT" is given.

FORWARD IN QUICK TIME

On the command, "FOR – WARD", you will:

a. straighten your right leg and assume the position of attention;
b. shoot your left foot forward in a 35 cm (15 in.) pace; and,
c. continue marching in quick time, swinging your right arm forward and your left arm to the rear.

HALT IN QUICK TIME

On the command, "SQUAD – HALT", you will:

a. take a further mark time pace with your right foot;
b. take a further mark time pace with your left foot; and,
c. straighten your right leg in double time and assume the position of attention.

The timing for the halt is counted one, one – two.

EO 401.13: LEFT AND RIGHT TURNS ON THE MARCH

Turns and inclines on the march are executed to change direction and formation.

On the command, "LEFT – TURN", given as the right foot is forward and on the ground, squad members will complete a 35 cm (15 in.) pace with the left foot and with the right arm swung forward and the left arm to the rear:

a. cut the arms to the side as in the position of attention;
b. bend the right knee so the upper leg is parallel to the ground;
c. force the shoulders 90 degrees to the left to face the new direction;
d. simultaneously, pivot on the ball of the left foot 90 degrees to the left and straighten the right leg as in the position of attention;
e. shoot the left foot forward in a 35 cm (15 in.) pace with the toe just clear of the ground;
f. keep the body and head erect;
g. keep the arms, body and head steady; and,

h. complete the 35 cm (15 in.) pace with the left foot and continue marching (swinging the arms).

On the command, "LEFT IN-CLINE", the drill described in turning to the left is followed except that the turn is made through 45 degrees.

On the command, "RIGHT -TURN", given as the left foot is forward and on the ground, squad members will complete a 35 cm (15 in.) pace with the right foot, swing the left arm forward and the right arm to the rear:

a. cut the arms to the side as in the position of attention;
b. bend the left knee so the upper leg is parallel to the ground;
c. force the shoulders 90 degrees to the right to face the new direction;
d. simultaneously, pivot on the ball of the right foot 90 degrees to the right and straighten the left leg as in the position of attention;
e. shoot the right foot forward in a 35 cm (15 in.) pace with the toe just clear of the ground;
f. keep the body and head erect and steady; and,
h. complete the 35 cm (15 in.) pace with the right foot and continue marching (swinging the arms).

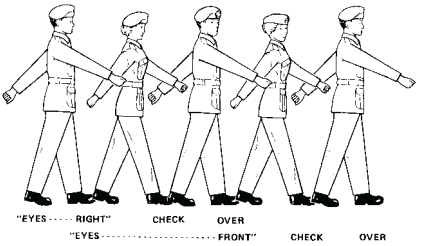
On the command, "RIGHT IN-CLINE", the drill described in turning to the right is followed except that the turn is made through 45 degrees.

EO 401.14: PAY COMPLIMENTS WITH A SQUAD ON THE MARCH

On the command, "EYES – RIGHT (LEFT)", you will:

a. complete a full pace forward with your right foot and as your left foot comes forward and strikes the ground, turn your head and eyes to the right (left) as far as possible without straining and look directly into the eyes of the person being saluted;
b. continue swinging your arms; and,
c. the leading cadet on the directing flank will look to the front to keep direction.

On the command, "EYES – FRONT", you will complete a full pace forward with your right foot and, as your left foot comes forward and strikes the ground, cut your head and eyes smartly to the front.

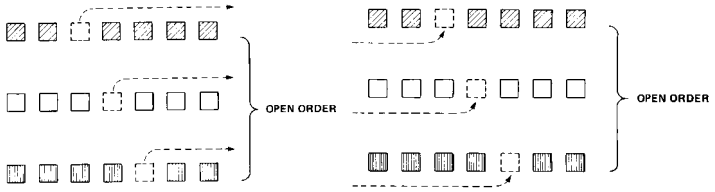


EO 401.15: FALL IN AND FALL OUT OF RANKS

FALLING OUT OF RANKS

The command, "FALL – OUT", will be used when an individual is called out of the squad.

On the command, "FALL – OUT" the cadet named will come to attention, march to the right of the flank of the squad in front of his/her rank, and then proceed in the required direction.



FALLING INDIVIDUALS IN

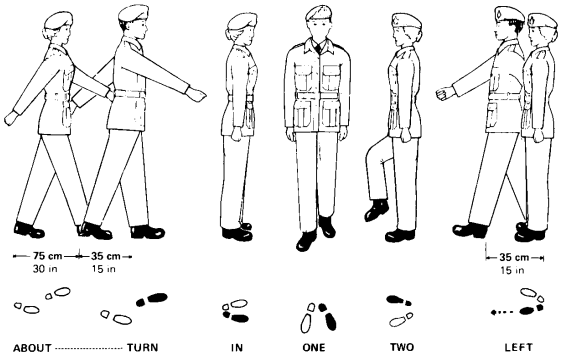
On the command, "FALL – IN", the cadet ordered marches to the left flank of the squad and returns to his/her position by marching in rear of his/her rank, wheeling into his/her original position, and halting. He/she will pick up his/her dressing and remain at attention or stand at ease, as required.

When called forward to receive an award (promotion, etc.), come to attention, observe the standard pause, march forward and right wheel, then march along the front of your own rank to the right marker. From the right marker take the most direct route to the person who called you out, halting two paces in front. After saluting (as required), observe the standard pause then step forward one pace to receive the award. After receiving the award, take one step back and salute (if required). After observing the standard pause, turn right, pause then march off, taking the most direct route back to your own rank's left marker. March in behind your rank, wheel and halt in position. Stand at ease after observing the standard pause.

EO 401.16: ABOUT TURN ON THE MARCH

On the command, "ABOUT – TURN", given as the right foot is forward and on the ground, squad members will:

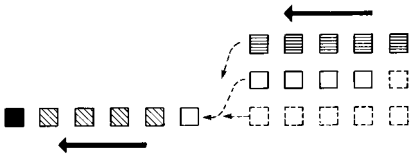
a. take a 35 cm (15 in.) pace with the left foot;
b. bring the right foot in to the left, in a straight-leg manner above the ground, to the position of attention;
c. simultaneously, cut the right arm down and the left in from the rear as the left foot comes in;
d. maintain the cadence;
e. maintain the arms at the sides;
f. pivot on the sole of the right foot to force the body through a turn of 90 degrees to the right;
g. simultaneously, bend the left knee so that the thigh is parallel to the ground;
h. then lower the leg smartly to the ground to assume the position of attention;
j. maintain the arms at the sides;
k. pivot on the sole of the left foot to force the body through a turn of 90 degrees to the right;
m. simultaneously, bend the right knee so the thigh is parallel to the ground;
n. then lower the leg smartly to the ground to assume the position of attention; and,
p. step off in quick time with a 35 cm (15 in.) pace with the left foot in the new direction.



EO 401.17: EXECUTE SQUAD IN THREES FORMING SINGLE FILE FROM THE HALT

On the command, "SINGLE FILE FROM THE LEFT (RIGHT), QUICK – MARCH":

a. the directing flank marches off in single file in quick time; and,
b. the remainder marks time. The leading cadet of the centre and remaining single file executes a left (right) incline and leads off in single file when the single file on his/her left (right) is clear.



EO 401.18: EXECUTE SQUAD IN SINGLE FILE REFORMING THREES ON THE MARCH

On the command, "ON THE RIGHT (LEFT) RE-FORM THREES FRONT RANK MARK – TIME", given as the right foot is forward and on the ground:

a. the rank leading marks time; and,
b. remainder reforms threes and marks time.

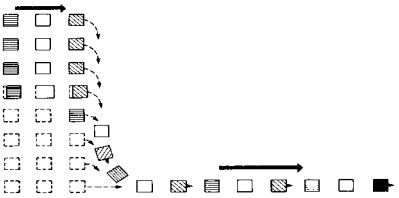
On the command, "FOR-WARD" or "SQUAD – HALT", the squad acts as previously taught.

EO 401.19: EXECUTE SQUAD IN LINE FORMING SINGLE FILE FROM THE HALT

On the command, "SINGLE FILE FROM THE RIGHT (LEFT), QUICK – MARCH":

a. the directing flank marches forward in single file in quick time; and,
b. the remainder marks time, leads off, and wheels in single file following the file on its right (left).

On the command, "FOR-WARD or SQUAD – HALT", the squad acts as previously taught.



On the command, "ON THE LEFT (RIGHT), RE-FORM LINE, REMAINDER MARK" – TIME", given as the right foot is forward and on the ground:

a. the leading file marks time; and,
b. the remainder reforms line, and marks time.

On the command, "FOR-WARD or SQUAD – HALT", the squad acts as previously taught.

EO 401.20 EXECUTE SQUAD IN SINGLE FILE RE-FORMING LINE ON THE MARCH

On the command, "ON THE RIGHT (LEFT) RE-FORM LINE REMAINDER MARK – TIME", given as the right foot is forward and on the ground:

a. the leading file marks time; and,
c. the remainder reforms a line and marks time.

On the command, "FOR-WARD" or "SQUAD – HALT", the squad acts as previously taught.

EO 401.21: EXECUTE CHANGE STEP ON THE MARCH

In quick time, on the command, "CHANGE STEP BY NUMBERS SQUAD – ONE", given as the right foot is forward and on the ground, cadets will:

a. complete a 35 cm (15 in.) pace with the left foot;
b. swing the right arm forward;
c. swing the left arm to the rear;
d. force the weight forward on the left foot; and,
e. raise the right heel off the ground.

On the command, "SQUAD – TWO", cadets will:

a. cut the arms to the side as in the position of attention;
b. bring the right foot forward in double time by bending the right knee;
d. straighten the right leg in double time and place the right foot smartly beside the left; and,
e. as the right foot strikes the ground, shoot the left foot forward in a 35 cm (15 in.) pace, landing on the heel with the toe up.

On the command, "SQUAD – THREE", cadets will:

a. swing the right arm forward;
b. swing the left arm to the rear; and,
c. continue marching in quick time.

On the command, "CHANGE STEP", the three movements are combined. The timing is counted in double time, as Left, Right, Left.

CHANGING STEP WHEN MARKING TIME

In quick time on the command, "CHANGE – STEP", given as the right foot is on the ground, cadets will:

a. make two successive mark time paces with the left foot; and,
b. continue marking time.

The timing is counted in the same cadence as marking time as "LEFT, LEFT – RIGHT".

EO 401.22: ORDER A PLATOON ON PARADE

Prior to falling in, the platoon will assemble in three ranks at the edge of the parade ground and stand at ease. The Platoon 2 I/C will detail one cadet to act as marker. The marker will then take up position as the right hand cadet of the front rank and stand at ease. The Platoon 2 I/C will then proceed onto the parade ground and halt three paces in front of where the Platoon 2 I/C wishes the marker to fall-in.

On the command, "MARKER", the cadet detailed as marker will:

a. come to attention and observe the standard pause;
b. march in quick time to a position three paces in front of, and facing, the Platoon 2 I/C and halt; and,
c. remain at attention.

The Platoon 2 I/C then turns right and marches to a position three paces in front and centre of where the platoon will fall-in.

On the command, "FALL – IN", platoon members will:

a. come to attention;
b. observe the standard pause;
c. march on to the parade ground, halt on the left of and covering off the marker; and,
d. remain at attention.

The Platoon 2 I/C may then call the roll, size the platoon, etc.

If the platoon has supernumerary officers, WOs, and senior NCOs, the following procedure is carried out:

a. The WOs and senior NCOs will form up in a supernumerary rank, three paces behind the rear rank, evenly spaced across the platoon frontage. They then will act on the orders of the Platoon 2 I/C;
b. the supernumerary officers will be ordered to fall in by the platoon commander; and,
c. the Platoon 2 I/C will then proceed as required, eg "OPEN ORDER – MARCH, RIGHT – DRESS, EYES – FRONT, STAND AT – EASE."

The platoon will then be handed over to the platoon commander in the following manner:

a. the Platoon 2 I/C calls the platoon to attention;
b. the Platoon Commander halts two paces in front of the Platoon 2 I/C who salutes and, when the salute has been acknowledged, reports the platoon, eg "Good morning Sir, the platoon is formed up ready for your inspection, 32 other ranks on parade, two on sick parade, Sir."
c. upon being ordered to fall-in, the Platoon 2 I/C salutes, and after the salute has been acknowledged, turns right and proceeds by a series of wheels around the right flank to take up position three paces centre and rear of the platoon; and,
d. the Platoon Commander marches forward two paces and occupies the Platoon 2 I/C former position.

When the Platoon 2 I/C orders the right dress, the procedure as detailed previously is followed. The command "EYES FRONT" is ordered by the Platoon 2 I/C after the Platoon 2 I/C returns to the position in front of the platoon.

SIZING IN SINGLE RANK AND REFORMING THREES

On the command, “TALLEST ON THE LEFT, SHORTEST ON THE RIGHT, IN SINGLE RANK – SIZE,” the squad shall turn right, observe the standard pause, then arrange themselves according to height in a single rank, at shoulder dressing, tallest on the right and shortest on the left.

On the command, “SQUAD NUMBER,” the squad members will call out their number, counting from right to left.

On the command, “ODD NUMBERS ONE PACE FORWARD, EVEN NUMBERS ONE PACE STEP BACK – MARCH,” the squad shall act as ordered.

On the command, “NUMBER ONE STAND FAST, ODD NUMBERS RIGHT, EVEN NUMBERS LEFT – TURN,” the squad shall act as ordered.

On the command, “REFORM THREES QUICK MARCH,” the squad reforms three ranks as follows:

a. number one remains the right marker of the front rank;

b. number three becomes the right marker of the centre rank;
c. number five becomes the right marker of the rear rank, and so on; and,
d. when each person arrives in their new position, judging arm's length interval, they shall halt, observe the standard pause, turn left, and remain at attention.

EO 401.23: ADOPT PLATOON FORMATIONS

FORMING A HOLLOW SQUARE

The platoon will be in line in three ranks prior to forming hollow square.

On the command, "FORM HOLLOW SQUARE, CENTRE RANK RIGHT, REAR RANK LEFT – TURN", the platoon acts as ordered.

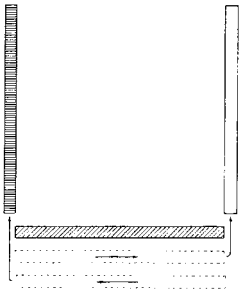
On the command, "CENTRE RANK LEFT WHEEL, REAR RANK RIGHT WHEEL, QUICK – MARCH", the platoon acts as ordered.

The command, "MARK – TIME", will be given when the rear cadets of the centre and rear ranks are one pace in front of the front rank.

On the command, "PLATOON – HALT", the platoon acts as ordered.

On the command, "CENTRE RANK LEFT, REAR RANK RIGHT – TURN", the platoon acts as ordered.

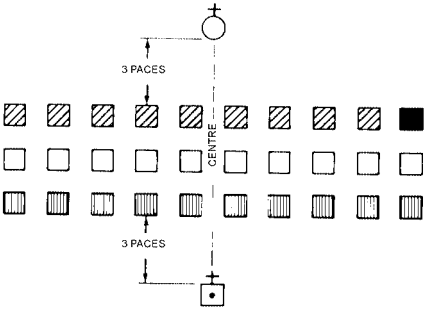
The reverse procedure is used to re-form the platoon into three ranks.



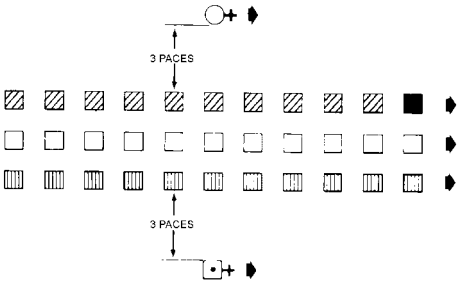
Regardless of frontage, when a platoon is formed up in line, the platoon commander will be positioned three paces in front and centre of the

platoon and the Platoon 2 I/C will be positioned three paces in rear and centre of the platoon.

PLATOON IN LINE, AND IN COLUMN OF THREES

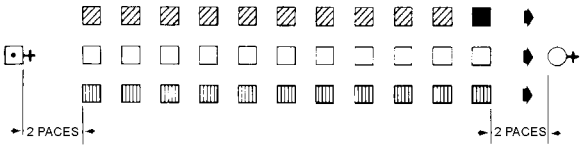


A platoon in column of threes is in the same formation as when in line, but facing a flank.



PLATOON IN COLUMN OF ROUTE

Column of route is similar to column of threes except that the Platoon Commander is two paces in front of the centre rank of the platoon and the Platoon 2 I/C is two paces in rear of the centre rank of the platoon. Column of



PLATOON IN LINE ADVANCING AND RETIRING

On the command, "PLATOON WILL ADVANCE BY THE RIGHT, QUICK – MARCH":

a. the platoon steps off in quick time and marches to the front; and,
b. the Platoon Commander and Platoon 2 I/C retain their positions as for a platoon in line, halted.

On the command, "PLATOON WILL RETIRE ABOUT – TURN", the platoon turns about and the Platoon Commander and Platoon 2 I/C retain their positions. On the command, "BY THE LEFT, QUICK – MARCH", the platoon steps off in quick time.

PLATOON MOVING TO THE RIGHT OR LEFT IN COLUMN OF THREES

On the command, "PLATOON WILL MOVE TO THE RIGHT IN COLUMN OF THREES, RIGHT – TURN", the platoon acts as ordered and the Platoon Commander and Platoon 2 I/C turn right and retain their positions as when in line. On the command "BY THE LEFT, QUICK – MARCH", the platoon step off in.

-To move the platoon to the left the same commands are ordered substituting left for right.

PLATOON MOVING TO THE RIGHT OR LEFT IN COLUMN OF ROUTE

-On the command, "PLATOON WILL MOVE TO THE RIGHT IN COLUMN OF ROUTE, RIGHT – TURN":

a. the platoon will act as ordered;
b. the Platoon Commander will turn right, observe the standard pause and move to the position in front of the platoon; and,

c. the Platoon 2 I/C will turn right, observe the standard pause and, by a series of wheels to the right move to his/her position in the rear of the platoon.

On the command, "BY THE LEFT, QUICK – MARCH", the platoon steps off in quick time.
To move the platoon to the left the same commands are ordered substituting left for right. The Platoon Commander moves to the head of the platoon, the original left flank and the Platoon 2 I/C to the rear, the original right flank.

PLATOON ADVANCING AND RETIRING IN COLUMN OF THREES FROM THE LEFT

On the command, "PLATOON WILL ADVANCE IN COLUMN OF THREES FROM THE LEFT, LEFT – TURN", the platoon acts as ordered. The Platoon Commander and Platoon 2 I/C turn left and retain their positions as when in line.

On the command, "RIGHT WHEEL, BY THE RIGHT, QUICK – MARCH", the platoon wheels to the right as it steps off in quick time.

On the command, "PLATOON WILL RETIRE IN COLUMN OF THREES FROM THE LEFT, LEFT – TURN; LEFT WHEEL, BY THE LEFT, QUICK – MARCH", the platoon wheels to the left as it steps off in quick time. On completion of the wheel, the Platoon Commander normally orders "BY THE RIGHT" and dressing then is taken by the right flank.

PLATOON ADVANCING AND RETIRING IN COLUMN OF ROUTE FROM THE LEFT

On the command, "PLATOON WILL ADVANCE IN COLUMN OF ROUTE FROM THE LEFT, LEFT – TURN", the platoon acts as ordered. The Platoon Commander and Platoon 2 I/C move to their position in column of route.

On the command, "RIGHT WHEEL, BY THE RIGHT, QUICK – MARCH", the platoon wheels to the right as it steps off in quick time.

On the command, "PLATOON WILL RETIRE IN COLUMN OF ROUTE FROM THE LEFT, LEFT – TURN; LEFT WHEEL, BY THE LEFT, QUICK – MARCH", the platoon wheels to the left, as it steps off in quick time. The Platoon Commander and Platoon 2 I/C are in their positions in column of route.

PLATOON RETIRING, REQUIRED TO MOVE TO A FLANK ON THE MARCH

On the command, "PLATOON WILL MOVE TO THE LEFT, LEFT – TURN", the platoon will act as ordered.

PLATOON MOVING TO A FLANK, REQUIRED TO TURN ABOUT

On the command, "PLATOON MOVE TO THE RIGHT (LEFT) IN THREES (COLUMN OF ROUTE), ABOUT – TURN", the platoon will act as ordered. The Platoon Commander and Platoon WO will turn about with the platoon and maintain their relative positions in the column formation. If column of route is ordered, the Platoon Commander and Platoon 2 I/C will turn about and double to their respective positions in a clockwise direction, two paces in front and rear of the centre rank, where they will resume marching in quick time.

PLATOON ADVANCING AND RETIRING IN COLUMN OF THREES FROM THE RIGHT

On the command, "PLATOON WILL ADVANCE IN COLUMN OF THREES FROM THE RIGHT, RIGHT – TURN", the platoon acts as ordered. The Platoon Commander and Platoon 2 I/C turn right and retain their positions as when in line.

On the command, "LEFT WHEEL, BY THE LEFT, QUICK – MARCH", the platoon wheels to the left as it steps off in quick time.

On the command, "PLATOON WILL RETIRE IN COLUMN OF THREES FROM THE RIGHT, RIGHT – TURN; RIGHT WHEEL, BY THE RIGHT, QUICK MARCH", the platoon wheels to the right as it steps off in quick time. On completion of the wheel, the Platoon Commander normally orders, "BY THE LEFT", and dressing then is taken from the left flank.

PLATOON ADVANCING AND RETIRING IN COLUMN OF ROUTE FROM THE RIGHT

On the command, "PLATOON WILL ADVANCE IN COLUMN OF ROUTE FROM THE RIGHT, RIGHT – TURN", the platoon acts as ordered. The Platoon Commander and the Platoon 2 I/C move to their positions in column of route.

On the command, "LEFT WHEEL, BY THE QUICK – MARCH", the platoon wheels to the left as it steps off in quick time.

On the command, "PLATOON WILL RETIRE IN COLUMN OF ROUTE FROM THE RIGHT, RIGHT -TURN; RIGHT WHEEL; BY THE RIGHT, QUICK – MARCH", the platoon wheels to the right, as it steps off in quick time. The Platoon Commander and Platoon 2 I/C are in their positions in column of route. On completion of the wheel, the Platoon Commander normally orders "BY THE LEFT" and dressing is then taken by the left flank.

EO 401.24: ORGANIZE AN ANNUAL CADET CORPS REVIEW

A cadet corps review is a military ceremony held on occasions such as:

a. the cadet corps annual inspection;
b. awards and presentations; and,
c. changes of command.

The drill outlined in this lesson is for a cadet corps with a strength of 30 to 40 cadets who form up in line and march past in column of route in quick time. This parade is executed without arms. Those of you who are familiar with CF Manual of Drill and Ceremonial (A-PD-201-000/PT-000) will realize there are other correct ways to stage a ceremonial review besides the one indicated here. It should also be noted that the cadet corps annual inspection does not have Cadet Instructor Cadre (CIC) officers on parade, so where applicable, substitute the words "commanding officer" by "cadet commanding". The parade appointments must be modified to suit local conditions.

SEQUENCE OF A CADET CORPS REVIEW

The sequence of a cadet corps review is:

a. the reception of the reviewing officer;
b. the inspection by the reviewing officer;
c. the march past;
d. presentations, if any;
e. speeches;
f. the advance in review order; and,
g. the departure of the reviewing officer.

THE REVIEW PARADE GROUND

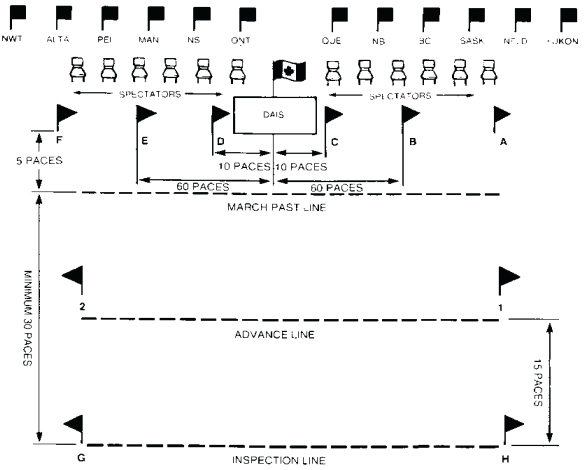
The correct marking and layout of the parade ground are two very important factors in preparing for a ceremonial review. The parade ground will be marked by flags or markers as illustrated in Figure 1-1.

The inspection line is the line on which the front rank of the cadet corps is formed for inspection. The march past line is the line along which the right flank of the corps marches during the march past. The advance line is the line at which the front rank of the corps halts on completion of the advance in review order.

The length of the inspection line (G-H) depends on the frontage of the cadet corps being inspected. Its distance from the march past line will be a minimum distance of 30 paces.

The length of the saluting base (B-E) will not be less than 120 paces nor greater than 260 paces, the actual distance being dependant on local conditions. The march past begins at Point B and ends at Point E. The reviewing officer will be located at the centre of the saluting base. Ten paces on each side of the reviewing officer, along the saluting base, are Points C and D, at which the salute will begin and end respectively.

As a general rule, the march past line (A-F) will be the same length as the inspection line and will be situated no closer than five paces in front of the saluting base.



The advance line (Points 1 and 2) will be the same length as the inspection line and will normally be situated 15 paces forward of the inspection line.

All points will be marked by flags. Flags may also be set up to mark the spot on which the cadet corps is to form (Points 1 and 2) and the inspection line (Points G and H). These locations may also be marked by other means, eg, chalk masking tape, spray paint, etc.

Flag(s), appropriate to the occasion, may be flown at the rear of the dais.

RECEPTION OF THE REVIEWING OFFICER

Prior to the arrival of the reviewing officer, the cadet corps will be formed at the open order, in line on the inspection line. Guests should be seated before the cadet corps marches onto the parade ground.

When the reviewing officer is in position on the dais, the RSM will order the appropriate salute. A suitable eight bars of music may be played, chosen in the order of priority which follows:

a. the General Salute;
b. an appropriate excerpt from the official march past of the affiliated unit; and,
c. an appropriate excerpt from the official march past of the formation/unit of the reviewing officer.

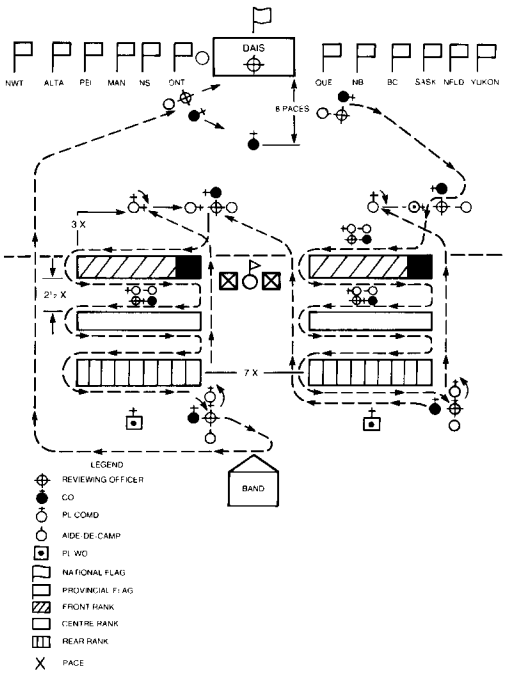
The word of command is "GENERAL SALUTE – SALUTE". The band plays the appropriate music and all parade positions salute, cutting their arms to the side after a standard pause following the last note of music. If a band is not available, the salute is completed with a standard pause between movements.

Upon termination of the salute, the RSM will report to the reviewing officer that the cadet corps is ready for inspection. The RSM may request that the remainder of the parade be stood at ease while the reviewing officer inspects the first platoon. If permission is given, the RSM will turn about and give the appropriate order. The RSM will then turn and accompany the reviewing officer on the inspection.

THE INSPECTION

When the reviewing officer inspects the cadet corps, the positions within the inspecting party are:

a. the reviewing officer, nearest the rank being inspected;
b. the Platoon Commander of the platoon being inspected, on the right of the reviewing officer;
c. the CO, in behind the reviewing officer; and,
d. the aide-de-camp, in behind the Platoon Commander.



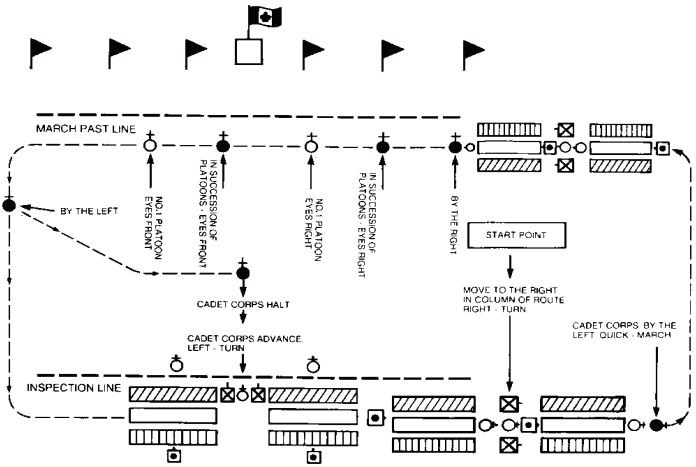
Unless specifically requested, the reviewing officer will not be preceded by anyone.

The reviewing officer will normally inspect the cadet corps by platoons. As the reviewing officer approaches each platoon from the right flank, the Platoon Commander will march to a position six paces in front of the platoon's right marker, salute the approaching reviewing officer and accompany the inspecting party during the inspection of the platoon. On completion of the inspection, the Platoon Commander will salute the reviewing officer and return to position on parade.

THE MARCH PAST

The formation used in a march past depends on the time and space available, the degree of training of the cadets and the formality of the occasion. The simplest march past is column of route in quick time.

The procedures, commands and actions required to march past in column of route are those of standard squad and platoon drill.



MARCH PAST IN COLUMN OF ROUTE

Item	Command	By	Action	Remarks
1			Before the arrival of the reviewing officer, the parade will be formed up in line at the open order. Once the reviewing officer is in position on the dais and the appropriate compliments are paid, the CO will move forward and request permission to carry on. Upon receiving permission to carry on, the CO will salute, turn about, and return to the command position.	
2	MOVE TO THE RIGHT IN COLUMN OF ROUTE RIGHT-TURN.	CO	The cadet corps will turn to the right.	
2A	CADET CORPS, BY THE LEFT, QUICK-MARCH.	CO	The cadet corps steps off in quick time.	

Item	Command	By	Action	Remarks
3			Upon reaching Point H, the CO wheels left and the cadet corps follows.	
4	BY THE RIGHT.	CO	Upon reaching Point A, the CO wheels left, leading the cadet corps onto the march past line. Command given as wheel completed by CO.	
5	IN SUCCESSION OF PLATOONS EYES-RIGHT.	CO		Given at Point B.
6	NO. 1 PLATOON, EYES-RIGHT.	No. 1 P1 Comd	CO, No. 1 P1 Comd salute, platoon turns head and eyes to the right.	The leading right-hand cadet maintains head and eyes to the front, guiding the platoon along the march past line.

Item	Command	By	Action	Remarks
6 (Cont)				Pl Comd ensures command given as CO reaches Point C. All the Pl comds give the same command to their Pl as they reach Point C. Leading right-hand cadet of No. 2, 3 Pls maintain head and eyes to the front, guiding their platoons along the march past line.
7	IN SUCCESSION OF PLATOONS EYES-FRONT.	CO		Given after passing dais.
8	NO. PLATOON EYES-FRONT.	No. 1 Pl Comd	CO and No. 1 Pl Comd cease salute, Pl turns head and eyes to the front.	Given once whole of platoon has passed Point D.
9	BY THE LEFT.	CO	CO wheels left at Point F. The cadet corps follows.	The CO completes a second left wheel, marches to the original position, halts and faces the inspection line. Upon reaching Point G, the leading Pl Comd wheels left and leads the cadet corps onto the inspection line.

Item	Command	By	Action	Remarks
10	NO. 1 PL, MARK-TIME REAR FILES-COVER.	CO	No. 1 Pl marks time, remainder continue forward until arrival at original position and then mark time.	Now is an excellent opportunity for all the cadets to check their dressing.
11	CADET CORPS-HALT	CO	Cadet corps halts	Command given when CO is satisfied that all the cadets have taken up their original position and confirmed their dressing.
12	CADET CORPS ADVANCE LEFT-TURN	CO	Cadet corps turns left.	On the command "LEFT-TURN" the CO turns about and faces the dais.

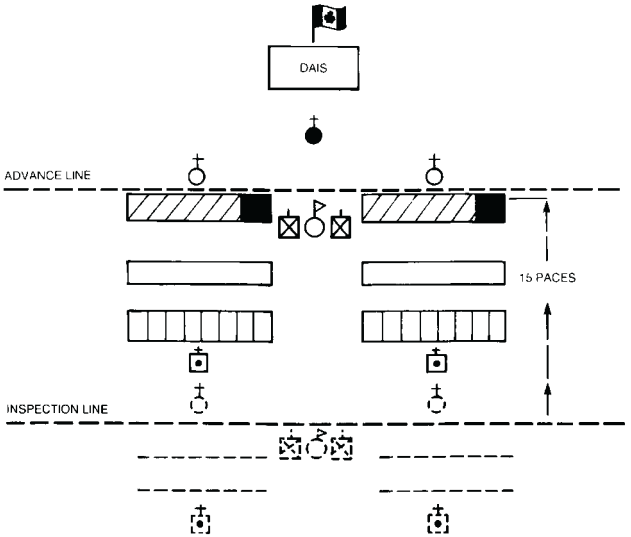
PRESENTATIONS AND ADDRESSES

If presentations are to be made, they should be made following the march past. Cadets who are to receive presentations should be rehearsed in the following:

a. falling out and marching to the front;
b. receiving the presentation according to procedure; and,
c. falling in.

Following a presentation, the reviewing officer may address the cadet corps. If the circumstances warrant, the CO may make a short reply.

THE ADVANCE IN REVIEW ORDER



The advance in review order is carried out to pay final compliments to the reviewing officer.

On the command, "ADVANCE IN REVIEW ORDER, BY THE CENTRE, QUICK – MARCH", by the CO, the cadet corps advances 15 paces and halts automatically, completing all forward movement on the last pace, and then bending the knee and assuming the position of attention .

In exceptional circumstances, where space does not permit the minimum 30 paces between the march past and inspection lines, a lesser advance may be specifically ordered, eg, "ADVANCE IN REVIEW ORDER 9 PACES, BY THE CENTRE, QUICK-MARCH". The front rank will always halt no closer than 15 paces from the march past line. If less than several paces can be taken, there will be no advance.

The CO then orders the appropriate compliments.

THE DEPARTURE OF THE REVIEWING OFFICER

On completion of the salute the reviewing officer will depart.

If the CO wishes to depart with the reviewing officer, the CO will do so only after calling forward the deputy commander and formally turning over command of the cadet corps.

EO 401.25: EXECUTE FLAG PARTY DRILL

GENERAL

When the national flag is carried on parade, it will be carried by a senior NCO.

The cadet corps flag may accompany the national flag on parade but the national flag will occupy the position of honour on the right.

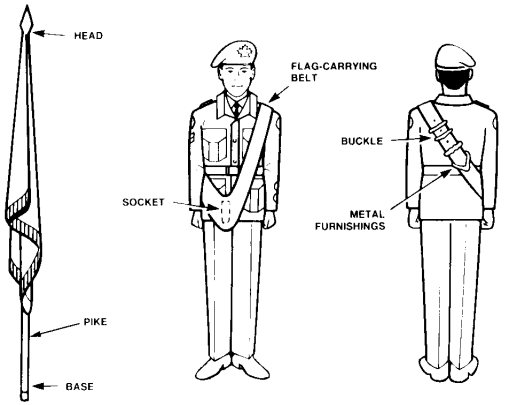
Flag drill will be executed with a standard pause between movements.

During an inspection of cadets on parade, the flag will be at the carry.

On the march, the flag will always be carried at the slope, except when the flag party is on the parade ground or paying compliments; then, the flag will be at the carry.

DRESS AND EQUIPMENT

The flag NCO wears the flag-carrying belt over the left shoulder.



POSITION OF THE ORDER

To assume the position of the order:

a. the flag bearer is at attention;
b. the pike is held vertically with the right hand, at the right side. The base of the pike is on the ground at the right side of the right foot, in line with the toe of the boot;
c. the pike and flag are held with an all-round grasp of the right hand, back of the hand outwards, at the point of the pike where the lowest corner of the flag reaches;
d. the flag hangs naturally down the pike and is not stretched;
e. the right elbow is at the side; and,
f. the right wrist is directly in rear of the pike.

STAND AT EASE FROM THE ORDER

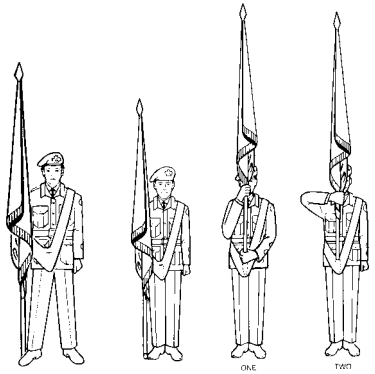
On the command, "STAND AT – EASE",

a. move the left foot in the normal manner; and,
b. keep the colour and pike unmoved in the same position as described for the order.

STAND EASY FROM STAND AT EASE

On the command, "STAND-EASY",

a. the flag and pike remain in the same position as the order;
b. the left arm is kept to the side; and,
c. the body is relaxed, but the feet and flag are not moved.



ORDER FROM STAND AT EASE

On the command, "ATTENTION", bend the left knee and place the left foot smartly beside the right and assume the position of the order.

CARRY FROM THE ORDER

On the command, "CARRY FLAG BY NUMBERS, SQUAD-ONE",

a. raise the flag with the right hand to a vertical position in front of the centre of the body, keeping the base of the pike just clear of the socket on the carrying belt and the right forearm along the pike ; and,
b. simultaneously, bring the left hand to the socket and guide the pike into the socket.

On the command, "SQUAD-TWO",

a. bring the left hand to the position of the order; and,
b. raise the right elbow until forearm is parallel to the ground.

On completion of the movement:

a. the right hand is opposite the mouth;
b. the right forearm is parallel to the ground at right angles to the pike;
c. the wrist of the right arm is straight;
d. the back of the hand is outwards; and,
e. the head and eyes are facing the front.

On the command, "CARRY-FLAG", the two movements are combined. A standard pause will be observed between the movements.

When rifles are carried on a parade and the parade is given the command, "SHOULDER-ARMS", the flag NCO(s) will assume the carry position, from the order, in time with the rifle movements.

ORDER FROM THE CARRY

On the command, "ORDER FLAG BY NUMBERS SQUAD-ONE",

a. raise the pike clear of the carrying belt socket with the right hand, bringing the right forearm from the horizontal position to a vertical position alongside the pike; and,
b. simultaneously, bring the left hand to the socket to steady the carrying belt.

On the command, "SQUAD-TWO",

a. carry the flag with the right hand to the position of the order; and,
b. move the left hand across the body to steady the pike.

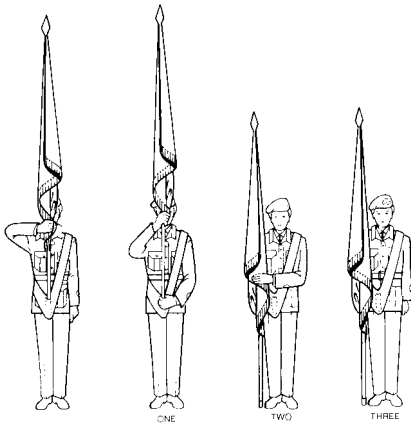
On completion of the movement:

a. the back of the left hand is outwards;
b. the fingers of the left hand are extended and pointing to the right; and,
c. the left forearm is parallel to the ground.

On the command, "SQUAD-THREE", carry the left hand to the side, assuming the position of attention.

On the command, "ORDER-FLAG", the three movements are combined. A standard pause will be observed between the movements.

When rifles are carried on parade and the parade is given the command, "ORDER-ARMS", the flag NCO(s) will assume the order position, from the carry, in time with the rifle movements. The only exception to this situation is when the command is given just prior to the inspection, at which time the flag NCO(s) will remain at the carry.



SLOPE FROM THE CARRY

On the command, "SLOPE FLAG BY NUMBERS, SQUAD-ONE",

a. raise the pike clear of the socket with the right hand, bringing the right forearm from the horizontal position to a vertical position alongside the pike; and,
b. simultaneously, bring the left hand to the socket to steady the pike.

On the command, "SQUAD-TWO",

a. lower the flag with the right hand to the right shoulder; and,
b. simultaneously, grasp the pike above the right hand with the left hand, with an all-round grip, to steady the pike.

On completion of the movement:

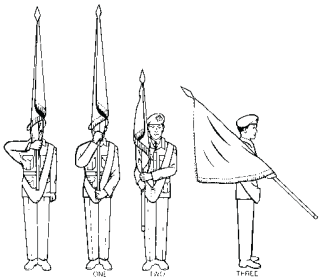
a. the flag is at a 45-degree angle on the right shoulder;
b. the elbow is close to the body;
c. the right forearm is parallel to the ground;

d. the flag hangs over and covers the right shoulder and arm; and,
e. the pike does not show between the hand and the shoulder as it is covered by the flag.

On the command, "SQUAD-THREE", carry the left hand to the side assuming the position of the order.

After the flag party has finished paying compliments or when it has departed the review parade ground, a flag should normally be returned to the slope in the following manner:

a. on the command, "QUICK-MARCH", the flag NCO(s) will assume the slope from the carry position, executing the first movement on the first pace with the left foot and the remaining movements on successive paces with the left foot;
b. when the senior flag NCO gives the command, "SLOPE-FLAGS", after paying compliments in situations other than a review parade ground, the command is given on the left foot and the movement is executed as above: and,
c. when only one flag is carried the flag NCO will carry out the movement detailed above without word of command.



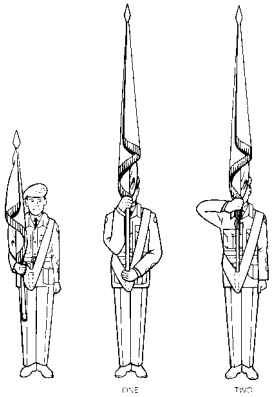
CARRY FROM THE SLOPE

On the command, "CARRY FLAG BY NUMBERS, SQUAD-ONE",

a. raise the flag off the right shoulder with the right hand to a perpendicular position; and,
b. simultaneously, bring the left hand to the socket to guide the base of the pike into the socket.

On the command, "SQUAD-TWO", cut the left hand to the side assuming the carry position.

On the command, "CARRY-FLAG", the two movements are combined. A standard pause will be observed between the movements.



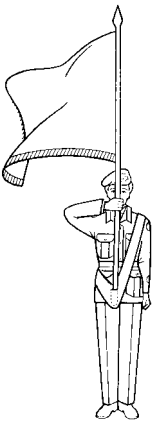
LET FLY FROM THE CARRY

On the command, "LET FLY-FLAG", release the flag with the right hand while maintaining the grip on the pike.

When rifles are carried on parade and the parade is ordered, "GENERAL SALUTE, PRESENT-ARMS", the flag will be let fly on the last movement of the present arms.

During the march past in quick time, on the command, "EYESRIGHT", the flag is let fly on the next left foot.

On the command, "EYES-FRONT", the flag is caught as detailed in the following paragraphs.



CATCHING THE FLAG FROM THE LET FLY

On the command, "CATCH THE FLAG BY NUMBERS, SQUAD-ONE",

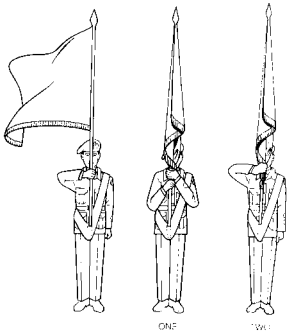
a. grasp the flag with the left hand and bring it into the pike; and,
b. simultaneously, grasp the corner of the flag with the right hand in the position of the order.

On the command, "SQUAD-TWO", cut the left hand to the side to the position of attention and raise the right forearm to the horizontal position.

On the command, "CATCH THE-FLAG", the two movements are combined. A standard pause will be observed between the movements.

Depending on the wind direction, the flag may be grasped with the right hand after securing the pike in the left hand. If, because of wind strength, the flag cannot be caught, the flag will be brought to the position of the order, the flag secured and returned to the carry.

When arms are carried on parade and the parade is ordered, "SHOULDER-ARMS" from the present, the flag NCO(s) will carry out the two movements in time with the rifle movements.



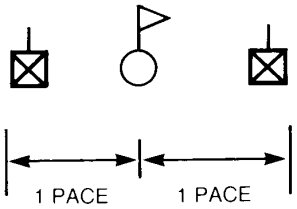
COMPOSITION OF A FLAG PARTY

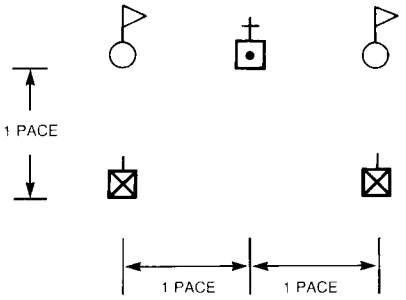
The composition of a flag party carrying one flag will be as follows:

a. flag NCO – one sergeant or above, if necessary; and,
b. flag escorts – two master corporals or below.

The composition of a flag party carrying two flags will be as follows:

a. flag NCOs – two warrant officers or above, and,
b. flag escorts – one sergeant and two master corporals or below,

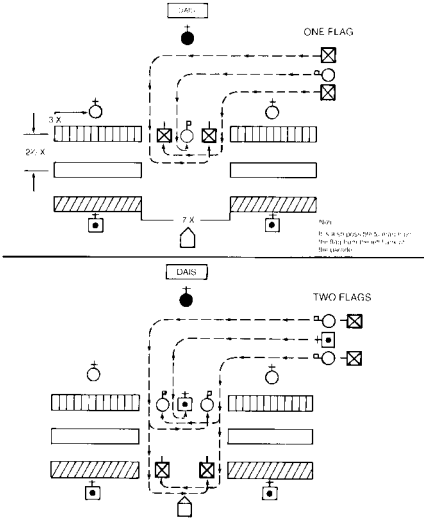




MARCHING ON THE FLAG

On the command, "MARCH ON THE FLAG", given by the CO, the following actions will take place:

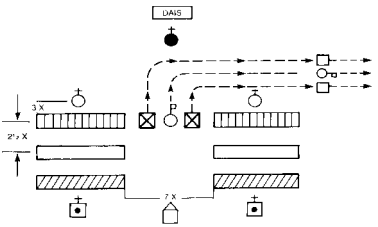
a. the senior flag NCO will order the cautionary word of command, "FLAG PARTY";
b. the CO will order, "TO THE FLAG SALUTE";
c. the senior flag NCO will order "BY THE RIGHT (CENTRE), QUICK – MARCH". If a band is on parade it will play the appropriate music; and,
d. the flag party will march to its position by a series of wheels. Once the flag party is in position, it will act on the word of command by the CO.



MARCHING OFF THE FLAG

At the conclusion of the parade, the CO will order, "MARCH OFF THE FLAG", and the following actions will take place:

a. the senior flag NCO will order the cautionary word of command, "FLAG PARTY";
b. the parade commander will order, "TO THE FLAG SALUTE" and all officers on parade will salute;
c. the senior flag NCO will then order "BY THE RIGHT (CENTRE) QUICK MARCH". If a band is present it will play the appropriate music; and,
d. the flag party, by a series of wheels, will march off the parade ground to the left or right flank of the parade.



EO 401.26: TEACH A DRILL MUTUAL

As with a regular lesson plan, there are four major headings that must be considered in a drill lesson plan. They are the **introduction**, the **body,** the **test** and the **conclusion.** The contents under each of the four headings is similar to a regular lesson plan although there are some small differences. These differences are outlined in the following paragraphs.

In the introduction, the only additional aspect that you will have to consider is the type of formation to use for instruction. The choice of formation is important because it allows elementary drill movements to be seen by all and ensures better class control. The three formations that are recommended are a single file, semi-circle and hollow square (the hollow square is taught on the Silver Star course). The single file is used for small groups of five cadets or less. The semi-circle (which has no formal drill command) is used for groups of six to nine cadets and the hollow square is used for 10 or more cadets. (Note that these quantities correspond to the number of cadets required to form one, two and three ranks of a squad).

The body of a drill lesson plan has a structure that is very specific and detailed. It is broken down into two stages as follows:

a. **Stage 1**:
 (1) With the squad standing easy, demonstrate the movement yourself while calling out the time, eg *"Squad,, pay attention as I demonstrate the complete movement while calling out the time... MYSELF ONLY (INSTRUCTOR) CALLING OUT THE TIME, RETIRE, ABOUT – TURN... One, two, three, One.";*
 (2) With the squad still standing easy, demonstrate the first part of the movement in detail, eg *"We will now look at the first part of that movement in some detail. Watch my demonstration of the first movement... MYSELF ONLY, ABOUT TURN BY NUMBERS, SQUAD – ONE...";*
 (3) Explain the first part of the movement, eg *"It is important to remember not to lose your balance, keep your arms by your side and thrust your body through 180 degrees to face the opposite direction.";*
 (4) Ask the members of the squad if they have any questions, eg *"Are there any questions with regard to the first part of the movement?";*

(5) Practise the squad on the first part of the movement in the following sequence, collectively, individually, collectively; and,
(6) If there is more than one part to the movement, teach the second and third parts of the movement and repeat the process as outlined in sub-subparagraphs (1) to (5).

b. **Stage 2**:
(1) Once you have finished teaching all the parts of the movement, practise the complete movement while you call out the time;
(2) Practise the complete movement with the squad calling the time; and,
(3) Practise the complete movement with the squad judging the time.

The test and conclusion portions of a drill lesson plan are no different than the ones you did for a skill or knowledge lesson plan. They should contain all of the same information.

As drill instruction is unlike any other kind of teaching in army cadets, there are techniques of instruction that are particular to drill. For example, your personal example is very important in the teaching of drill. An instructor's appearance and bearing will set an example for the squad to follow. You should always be at attention when instructing except if it is necessary to demonstrate a movement or correct a course cadet. All your own movements should be smart and correct.

You should try to develop a vocabulary of short and concise words to describe the drill movements. In this way the squad will act accordingly. Words like **drive, crack and strike** all suggest a degree of smartness.

Cadets will always learn the drill movements better if they are given short rest periods during your lesson. Put the squad at the stand easy and allow them to bend their knees and stretch out their arms. Anyone kept in the same position for extended periods of time will become stressed and fatigued.

If you want to correct a cadet's drill position, let the cadet know what is wrong and then move the cadet's arm (hand, feet, head, etc) to the correct position.

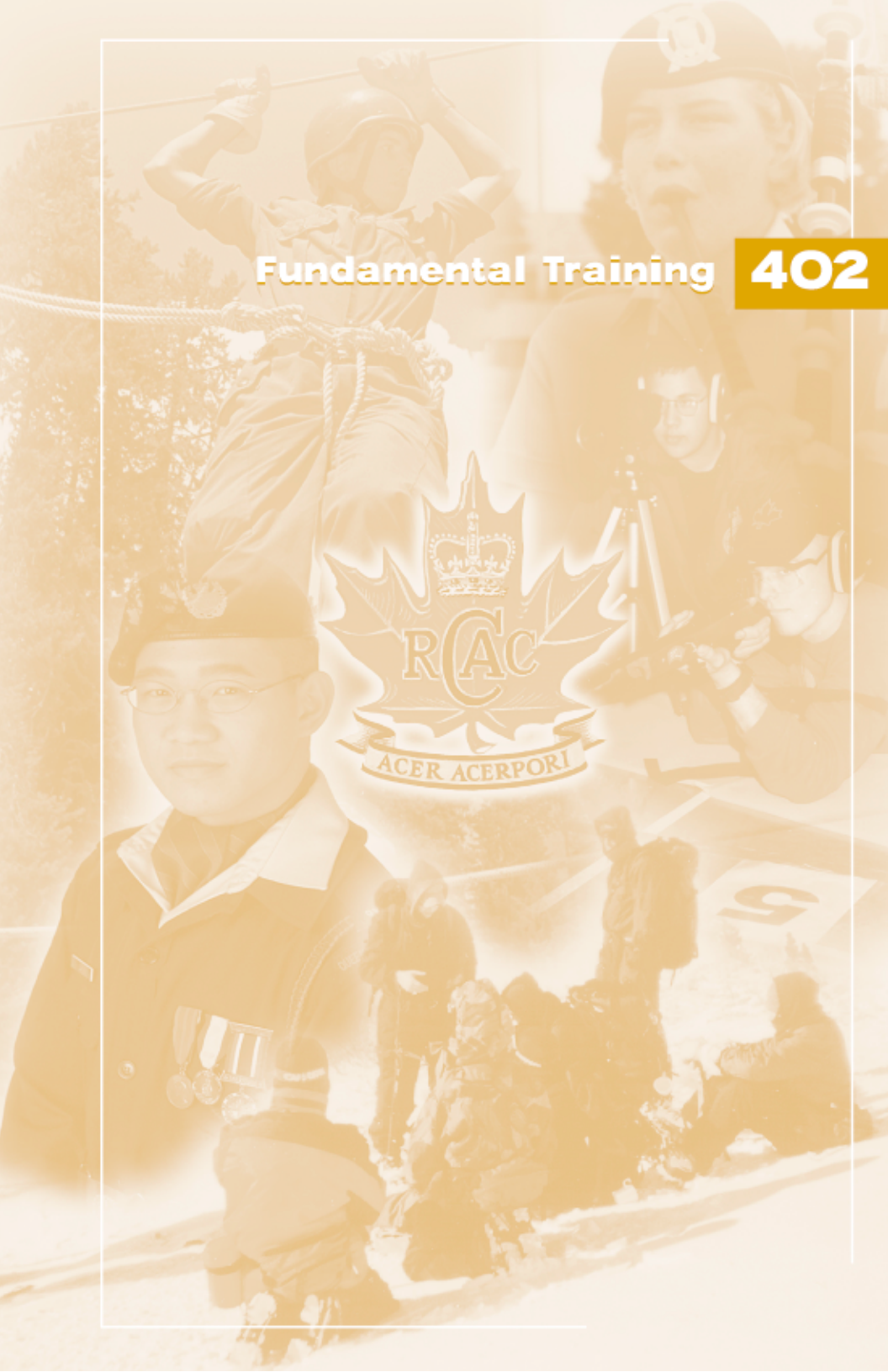
The class monitor will evaluate your lesson using the checklist below.

INTRODUCTION
Did the Instructor: a. conduct a revision? b. use the correct squad formation? c. state the aim (What)? d. state the reason (Why)? e. state the requirement for performance (Where)?
BODY
Did the Instructor: a. give a complete demo of the movement calling the time? b. give a demo of the first part of the movement, by numbers if applicable? c. explain the first part of the movement? d. permit the squad to ask questions? e. practice the first part of the movement – collectively – individually – collectively. f. teach and practice the second part and each subsequent part of the movement following the same sequence as for the first.
CONFIRMATION
Did the Instructor: a. practice the complete movement, with the instructor calling the time? b. practice the complete movement, with the squad calling the time? c. practice the complete movement with squad judging the time?

NOTES:

NOTES:

Fundamental Training 402



PO 402 FUNDAMENTAL TRAINING

EO	DESCRIPTION	PAGE
01	Observe dress regulations for the Royal Canadian Army Cadets	2-2
02	Discuss Army Cadet training	2-8
03	Identify officer and NCM rank structure in the Canadian Forces	2-10
04	Observe rules and procedures for addressing and Officer and NCO	2-11
05	Respond to questioning on the Cadet corps and Affiliated unit history	2-12
06	Identify badges and Medals of the Royal Canadian Army Cadets	2-14
07	Understand unit organization	2-18
08	Discuss history of the Royal Canadian Army Cadets	2-20
09	Identify Canadian, provincial, territorial and army cadet flags	2-27
10	List duties and responsibilities of a NCO	2-32
11	List decorations, medals and awards of the Canadian Forces	2-35
12	Complete a parade state	2-44
13	Write a memorandum	2-47

INTRODUCTION

The fundamentals, or the basics of the Royal Canadian Army Cadets provide you with general information regarding the different aspects of the army cadet movement and its program.

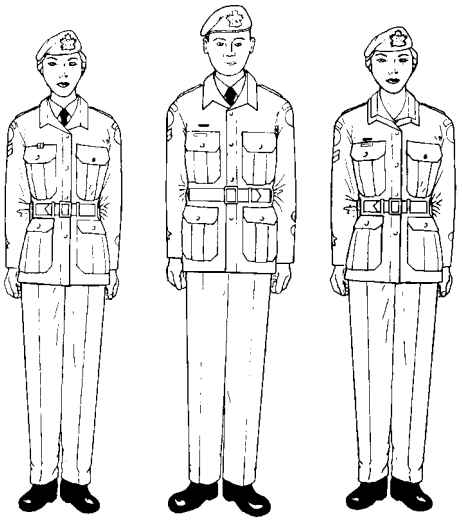
EO 402.01: OBSERVE DRESS REGULATIONS FOR THE ROYAL CANADIAN ARMY CADETS

DRESS REGULATIONS

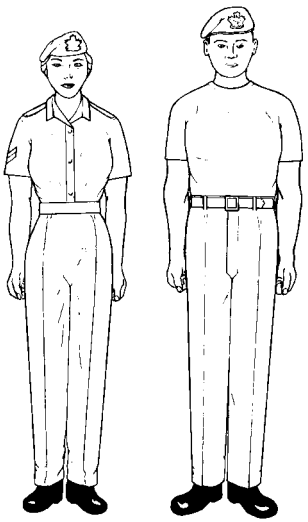
CATO 46-01 – Dress Regulations for the Royal Canadian Army Cadets detail dress regulations. Your Cadet Corps has a copy of this. The Department of National Defence approves and issues on loan, the uniform worn by Army Cadets. The care and custody of all items of clothing are the responsibility of the individual cadet and his/her parents or guardian.

The dress and appearance of Army Cadets in uniform will, on all occasions, be such to reflect credit to their cadet corps and the Royal Canadian Army Cadets. The uniform is to be worn only when attending authorized parades or activities. When cadets appear in uniform in public, it is their duty to be sure that their uniforms are properly maintained and worn correctly. You are not to wear parts of the uniform with parts of civilian clothing.

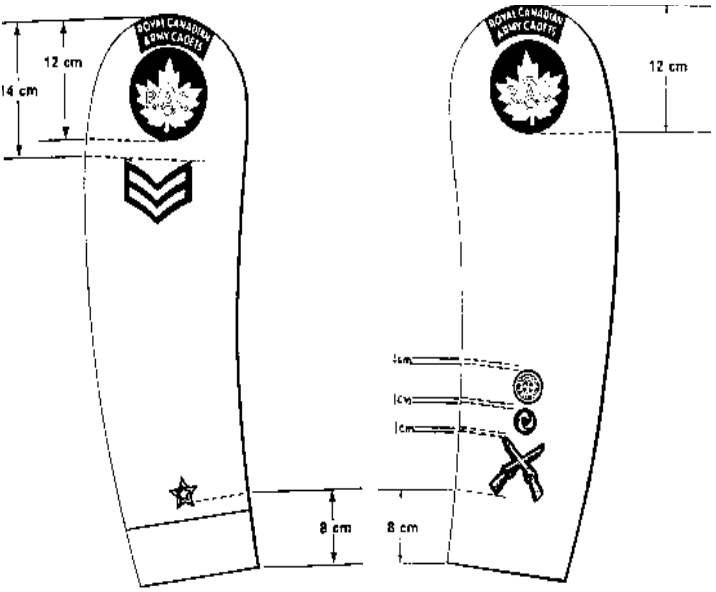
ARMY CADET UNIFORM



Army Cadet Uniforms C-1 (medals), C-2 (ribbons) and C-4



Army Cadet Uniforms C-4A and C-4B



Right Left

PLACEMENT OF BADGES

Only the most senior of a set of badges is worn at one time. E.g. Your new rank badge replaces the old, your new summer course badge replaces the previous year's, Standard first aid replaces Emergency, etc.

Right sleeve – badges are placed at the measurements above, starting with:

a. star level (NSCE or Master Cadet);
b. then summer course (Basic, CL or CLI series);
c. music appointment (Drum or Pipe Major – at 16cm from cuff); and,
d. rank (private through sergeant as above, Warrant officer to Chief at 16cm from cuff, or 1 cm above Pipe or drum Major).

Left sleeve – placed as shown above, starting with:

a. marksmanship;
b. physical fitness;
c. first aid;
d. instrument and level; and,
e. advanced training or exchange.

Left Chest:

a. Basic Parachutist qualification – immediately above the pocket;
b. Medals and ribbons – above the pocket, and below parachutist wings, with the most senior medal closest to centre; and,
c. Marksmanship championship and biathlon championship pins – centred on the pocket.

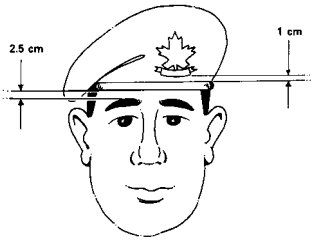
Right chest – the Duke of Edinburgh pin is worn, centred on the pocket.

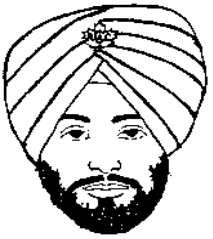
Shoulder Badge and Shoulder Flash are worn on both sleeves of the tunic. The bottom of the round RCAC badge is sewn as illustrated. The shoulder flash is to be sewn flush with the shoulder seam. If you have a name tag it is worn on the flap of the right breast pocket of the tunic. It is placed halfway between the button and the top of the flap.

CARE AND WEARING OF YOUR UNIFORM

The parts of your uniform are:

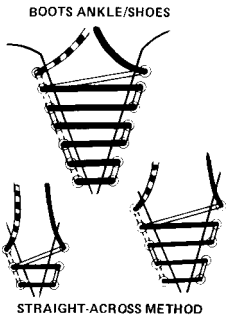
a. **Head dress** – wear your head-dress (beret, glengarry, peak cap, caubeen, turban, etc.) with your uniform while in public, and only take it off while eating or when required by tradition or custom;





b. **Tunic** – pressed with no creases;
c. **Shirt** – pressed with creases down the centre of each sleeve;
d. **Necktie** – ironed and tied in windsor knot;





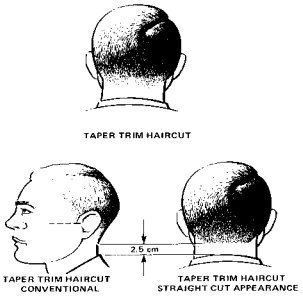
e. **Pants** – pressed with sharp creases down the center of the front and back;
f. **Boots** – completely polished, and laced up with the loose ends tucked into the top of the boot;
g. **Badges** – will be sewn on the tunic neatly with same colour thread as the badge;
h. **Socks** – clean and pulled up**.** You can wear your own socks if they match the issued socks, and you can wear a pair of liner socks underneath either pair; and,
i. **Jacket** – free from wrinkles and done up whenever it is worn.

PERSONAL APPEARANCE

Deportment – when you are in uniform you should present a good appearance. Chewing gum, slouching, hands in pockets, walking arm in arm, and similar actions do not look good for a cadet in uniform. The way you behave in uniform will affect what people think of all cadets. The pride you show in your uniform is a reflection of the pride you have in yourself and your Cadet Corps.

Dress – all clothing will be clean, without rips, loose threads, lint or missing buttons. The uniform encourages teamwork and assists team members in focusing on common goals. A new cadet who receives a uniform immediately feels part of the team. As a senior cadet, make every effort to instruct your cadets on how to wear the uniform. For yourself, help your cadets feel part of the team by keeping your uniform and appearance within the traditions of the movement.

Hair – will be clean and neat, with considerations made for religious and cultural traditions. Avoid shampoos, conditioners, hairspray, gels and mousse with strong odours. No hair should touch the collar, and no hair clips or bobby pins should be visible. Facial and neck hair will be shaved as required, and moustaches are allowed.





Make-up – limited make-up may be worn, however false eyelashes, heavy eyeliner, or brightly coloured eye shadow or nail polish cannot be worn. Avoid strong perfumes because many people are allergic.

Jewelry – you should avoid wearing jewelry because there is a good chance that you will break or lose these items during participation in training. Only one plain stud earring is allowed per ear. Wrist watches, medic alert bracelets and ID are allowed. If you choose to wear

religious or cultural accoutrements, you should wear them so that they are protected by your uniform clothing.

Ironing – to prevent damage to your pants and tunic, use a damp press cloth between the iron and clothes when pressing. Use spray starch on your shirt to make the creases sharp. Always iron using the medium-high setting with steam. Be especially careful when pressing creases that you press the same crease that was there before and that you do not create a second crease alongside the first.

Washing – wash your pants, tunic and socks in warm or cold water. Wash your shirt in hot water. All your uniform, except your headdress, is safe for machine drying. You should wash your uniform on a regular basis. Wash your headdress, if required, by hand and let it air dry. It is not necessary to dry clean the cadet uniform.

RESPONSIBILITY FOR THE UNIFORM

You should follow these rules to help safeguard your kit:

a. do not leave your uniform unattended;
b. mark your name in every item of clothing;
c. exchange damaged or poorly fitting parts of your uniform; and,
d. you must return your uniform promptly if you leave the Corps.

EO 402.02: DISCUSS ARMY CADET TRAINING

INTRODUCTION

The aims of the cadet organizations are to:

a. develop in youth the attributes of good citizenship and leadership;
b. promote physical fitness; and,
c. stimulate the interest of youth in the sea, land and air activities of the Canadian Forces.

The Director of Cadets 3 (D Cdts 3) – Program Development has developed the RCAC Training System to achieve these aims by:

a. providing a program that is progressive in its development of attributes of leadership and citizenship, and places cadets in roles of responsibility;
b. providing a program that is adventurous, and physically and mentally challenging; and,
c. providing a program that maintains formal links between Cadet Corps and components of the Canadian Forces through unit affiliation.

The cadet training year begins on 01 Jul and ends the following year on 30 Jun. The training year is divided into two parts:

a. Summer – 01 Jul to 31 Aug; and,
b. Local Headquarters (LHQ) – 01 Sep to 30 Jun.

12 COMPONENTS OF THE RCAC TRAINING SYSTEM

The Mandatory Program:

a. the star level program, comprising of green, red, silver, and gold star levels, as well as the National Star Certification Exam (NSCE) and the Master Cadet qualification; and,
b. mandatory support activities including weekend activities and extra day training sessions.

Directed Optional (NDHQ directed) activities:

a. music;
b. competitive marksmanship; and,
c. biathlon.

Optional Training – training that is encouraged within the army cadet program and may be supported where resources exist.

Summer Training Courses – summer training includes:

a. Familiarization Training (Basic Cadet courses) – 2 to 3 weeks;
b. NCO Qualifying Courses (Cadet Leader courses) – 6 weeks;
c. Warrant Officer Qualifying Courses (CLI courses) – 6 weeks; and,
d. Advanced Training Courses (Leadership and Challenge, Basic Parachutist Course) – 6 weeks.

Citizenship activities – activities preformed by the corps to assist their community.

Physical Fitness training and activities – sports, physical training and the Army Cadet Fitness Test (ACFT).

Cadet Harassment and Abuse Prevention (CHAP) Program – CHAP is a prevention-training program whose goal is to eliminate harassment within the Canadian Cadet Movement. The CHAP program has been developed to provide you with the awareness of your rights and responsibilities with regards to harassment and abuse.

Affiliated unit training – corps may have a chance to conduct familiarization training with their affiliated unit.

International exchanges – senior cadets have a chance to go on international exchange trips like the Army Cadet International Exchange (Sweden, Italy, etc.), Federal Republic of Germany Exchange, Maple Leaf Exchange, and the National Rifle Team.

Expeditions – you may have an opportunity to go on expeditions at the corps, Detachment Region or national level.

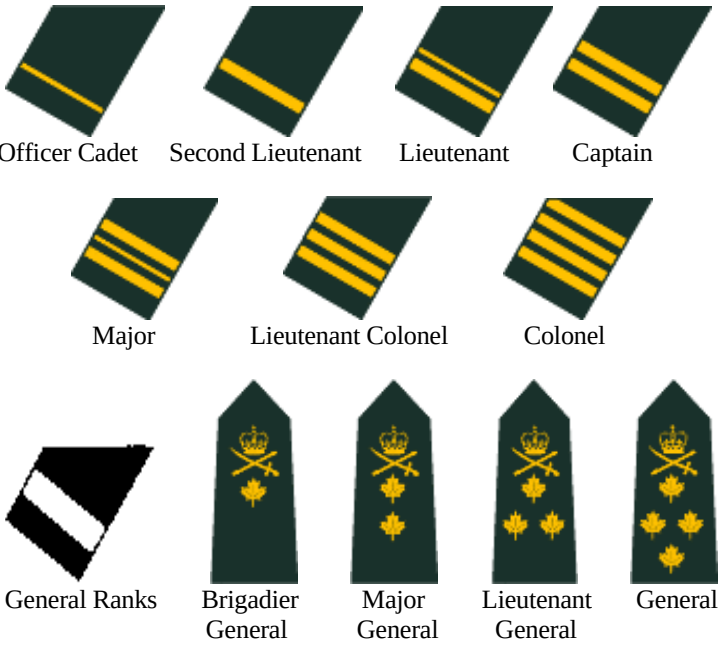
Summer employment – senior cadets can work at an Army Cadet Summer Training Centre as a Staff Cadet.

EO 402.03: IDENTIFY OFFICER AND NCM RANK STRUCTURE IN THE CANADIAN ARMY

NCM RANK BADGES



OFFICER RANKS



The “Chain of Command” within your corps exists so that information and instructions can be passed efficiently between all levels. It allows leaders to organize their teams quickly and gives everyone a job to do. The higher up the chain of command you are, the more responsibilities you have, however, everyone has an equally important role to play in the success of your corps. The chain works both ways, both for passing information down and for passing questions or answers back up. This system works because there is rarely any confusion over what each person’s responsibilities are.

EO 402.04: OBSERVE RULES AND PROCEDURES FOR ADDRESSING AN OFFICER AND A NCO

.

PAYING OF COMPLIMENTS

When you address a NCO you will – stand at attention, address him/her by rank and surname and remain at attention during the conversation.

When addressing an officer you will – stand at attention, salute when in uniform address him/her by rank and surname, remain at attention during the conversation; and salute when leaving the officer.

When you enter an office you will – stand at attention in the doorway and salute, remain at attention; enter only when told to do so. when leaving, stop at the door come to attention and salute.

When the National Anthem or Foreign National Anthem is played you will – if in uniform, you will come to attention and salute, on parade when formed up, you will stand at attention. In civilian's cloths, all personnel will remove headdress and stand at attention.

When in uniform you will stand at attention and salute when -the national flag is being lowered or raised, when the flag party marches past, the Royal Canadian Army Cadet Banner and Cadet Flag are paraded; and the Army Cadet Camp Flag is being raised or being lowered.

EO 402.05: THE CADET CORPS AND AFFILIATED UNIT HISTORY

THE AFFILIATED UNIT

For most Army Cadet Corps there is a unit of the Reserve or Regular Forces affiliated to them. The affiliated unit can help out in training and administration. As well as it lending Regimental traditions and sharing its history. Each cadet is entitled to wear the shoulder title and cap badge of his or her affiliated unit. These accoutrements should be worn with pride and honour.

Cadets should know the:

a. formation date of their Cadet Corps: _____;

b. history of their cadet corps including corps' achievements;

c. Corps sponsor(s): _____

_____;

d. name of their affiliated unit: _____

_____;

e. traditions that their own Cadet Corps has _____

CORPS AND AFFILIATED UNIT HISTORY

EO 402.06: IDENTIFY BADGES AND MEDALS OF THE ROYAL CANADIAN ARMY CADETS MEDALS

MEDALS

The **Medal of Bravery** is given for demonstrating superior bravery in the face of danger in trying to save the lives or property of others. **The Royal Canadian Humane Association** medal is given for saving or attempting to save a life – there are two levels, silver and bronze.

The **Lord Strathcona Medal** is given for demonstrating proficiency in the skills required for being an army cadet. The **Royal Canadian Legion Medal of Excellence** is given for demonstrating superior commitment to your corps and community.

The **ANAVET (Army, Navy, and Air Force Veterans) Cadet Medal of Merit** (not shown) is given for overall achievement on a Cadet Leader Instructor's course in the areas of leadership assessment and physical fitness performance.

The **Major General W. A. Howard Award** (not shown) is awarded for exemplary cadet service and outstanding performance on the National Star Certification Exam.



STAR PROGRAM BADGES



SUMMER TRAINING BADGES





MARKSMANSHIP BADGES



Levels – Marksman, First Class Marksman, Expert Marksman, Distinguished Marksman

ARMY CADET FITNESS TEST BADGES



SPECIALTY TRAINING BADGES



MUSIC BADGES



RCAC BADGE AND MOTTO

The maple leaf is a traditional symbol of Canada, and the crown signifies allegiance to Her Majesty the Queen. The motto ACER ACERPORI is Latin. "ACER" is the maple tree. "ACERPORI" is literally a "little boy maple" – a sapling. The ending "I" on "ACERPORI" means "comes from". We translate it, "As the maple, so the sapling."

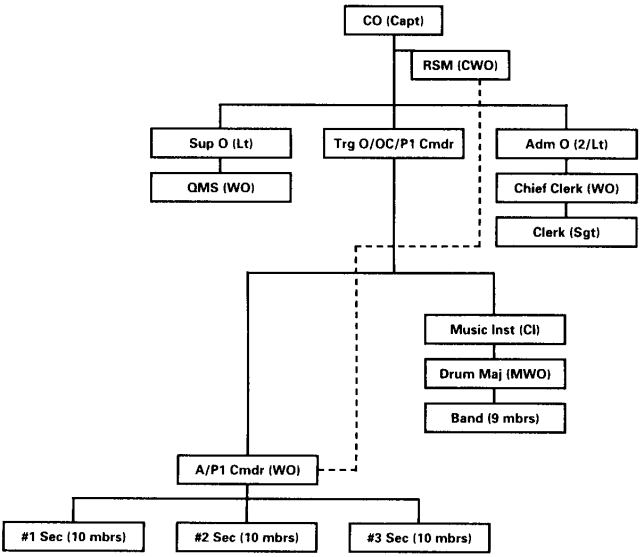


EO 402.07: UNDERSTAND UNIT ORGANIZATION

A cadet corps is made up of different components with different responsibilities. These include:

a. Headquarters section – Commanding Officer who is responsible for the safety, security and conduct of all the officers and cadets;
b. Administration section – makes sure that all paper work is completed ie. applications, camp forms, mail;
c. Training section – responsible for the training program;
d. Supply section – responsible for issuing uniforms and equipment, and maintaining all corps supplies;
e. Cadet Regimental Sergeant Major – responsible for everything relating to drill, discipline, duties of all NCO's, esprit-de-corps, and supervising cadets;
f. Cadet Company Sergeant Major – responsible for the discipline, dress and deportment of the company;
g. Cadet Platoon Warrant Officer – responsible for their platoon; and,
h. Cadet Section Commander – responsible for the training of the section.

EXEMPLE:



YOUR CADET CORPS ORGANIZATION CHART

EO 402.08: DISCUSS HISTORY OF THE ROYAL CANADIAN ARMY CADETS

Motivated by the American Civil War and the threat of the Fenian Raids, Canada's first school cadet units were formed between 1861 and 1865, several years before Confederation. These early cadet units were called "drill associations' – because in those days drill was not a parade square exercise but the method of maneuvering troops in battle. These early drill associations could have included members ranging in age from 13 to 60, so it might be argued that they were not really cadet corps but auxiliary militia companies.

The distinction between high school cadets and adult militiamen became clear in 1879 when the Militia General Order 18 authorized the formation of 74 "Associations for Drill in Educational Institutions," for young men over 14 years of age who were "upon no account to be employed in active service." The cadets provided their own uniforms. The cadets in the photograph below imported their uniforms from Scotland – at such great expense that only one youth per family could afford to belong.



The 74 drill associations authorized in 1879 included 34 in Ontario, 24 in Quebec, 13 in the Maritime provinces, 2 in Manitoba, and 1 in British Columbia. Canada's oldest continually serving cadet corps is No 2

Bishop's College School Cadet Corps in Lennoxville, Quebec – formed by the authority of Militia General Orders of 06 Dec 1861.

By 1887 the drill associations had detailed regulations governing their formation and activities. Arms and other equipment were issued to those schools that agreed to provide military training to boys over the age of 12 provided the school supplied accommodations and instructors, kept attendance records, and members supplied their own uniforms. This increased support was motivated in part by the campaign against the North-West Rebellion of 1885.

The term "Cadet Corps" appeared for the first time in Ontario in 1898, along with a provision that Corps instructors would be a member of the school teaching staff, instead of an instructor from the local militia unit. Militia General Orders #60 and #61, of 1899, first authorized Cadet Corps to be attached to militia units, limiting membership to young men 14-19 years old.

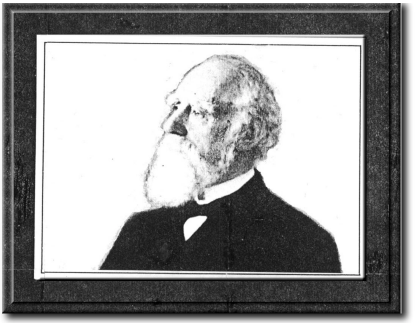


#10 Mount Forest High School Cadet Corps - 1902

In 1904, the current numbering system was established to identify cadet corps in their sequence of formation. In 1908 a cadre of commissioned officers was formed comprising of school teachers whom the Department of Militia and Defense trained and paid to conduct drill and physical training in participating schools. This officer

cadre was called the Cadet Services of Canada; it was a component of the Canadian Army and the forerunner of the current Cadet Instructor Cadre. This arrangement between the Federal Government and local school boards contributed significantly to the development of physical education programs in Canadian schools.

In 1910, Sir Donald Alexander Smith – Lord Strathcona – the Canadian High Commissioner to Britain, deposited in trust with the Dominion Government $500 000, bearing annual interest at 4%, to develop citizenship and patriotism in school cadets through physical training, rifle shooting, and military drill. Nearly a century later, the Strathcona Trust is still providing equipment for cadet training. About $50,000 is disbursed each year to Strathcona Trust committees across Canada.



Sir Donald Alexander Smith – Lord Strathcona

Young women have participated unofficially in cadet training almost from the beginning. You could always find a cadet corps somewhere that paraded a female platoon or company, in some semblance of uniform. But these unofficial female cadets could never lawfully be trained, issued uniforms or equipment, fed, transported or allowed to attend summer training. The problem was solved on 30 July 1975 when Parliament passed Bill C-16, amending the relevant legislation by changing the word “boys” to “persons”, thereby permitting females to become members of the Royal Canadian Army Cadets.



The Daughters of the Regiment - Guelph 1884

The Army Cadet organization flourished during the beginning of the 20th century. Some 40 000 former Army Cadets served in Canada's forces during World War One, and by the end of the war there were about 64 000 cadets enrolled in Army Cadet Corps across Canada.

The 1928 "Regulations for the Cadet Services of Canada" directs Army Cadet leaders to "…impart mental, moral, and physical training to their Cadets and [seek] to develop in them principles of patriotism and good citizenship." It goes on to recommend about cadet training, "The exercises need not be of too rigid a military pattern. Discipline, individual and collective, is essential, and drill of an elementary character is to be encouraged, but gymnastic exercises, physical drill, signalling, scouting, swimming, despatch riding, bridge building, map reading, and all forms of training that tend to produce physical fitness, mental and bodily alertness, individuality, self-reliance, and resourcefulness in emergencies are to be regarded as of not less value than military drill pure and simple."

When World War II began, public interest in cadet training was revived and cadet corps were formed in many high schools. It is estimated that nearly 124 000 former Army Cadets served in Canada's forces during WWII, with more than 19 000 receiving commissions and over 2 700 awarded decorations.

In 1942, in recognition of the significant contribution of former cadets to the war effort, His Majesty King George VI conferred the title "Royal" on the Royal Canadian Army Cadets and accepted the appointment of "Colonel-in-Chief" of the Royal Canadian Army Cadets. HRH Prince Philip, Duke of Edinburgh, presently holds this appointment.

The 1944 "RCAC Training Programme" lists Fundamentals, Health and Physical Education, Drill and Command, Small Arms Training, Knots…, Fieldcraft, Signalling, Band, First Aid, Woodcraft, Use of Maps, Organized Sports, I.C. (Internal Combustion) Engines, Weapon Training, and Instruction as authorized training subjects. Corps were assessed at their Annual Inspection and rated as to their efficiency (ability to show cadets were trained in all subjects) – the corps would then receive funding based on their annual inspection score!

After World War II, quotas were imposed reducing Canada's total Cadet force to about 75,000 members. Many of the "closed" corps – those whose membership was restricted to the students in one particular school – were disbanded – or withered away after their school made membership voluntary; some of them became "open" corps – training in militia armories or in Legion halls or, acquiring their own buildings. The Korean War stimulated growth among these "open" corps in the 1950s and 1960's.

1956, Her Majesty Queen Elizabeth authorized a new design for the RCAC crest, including the motto "ACER ACERPORI" "As the maple, so the sapling".

During the period 1964-66, the Canadian Forces underwent a complete reorganization. This culminated in unification of the CF on 01 Feb, 1968. At this time, the Cadet Services of Canada became the Cadet Instructors List, and the Directorate of Cadets was formed at National Defence Headquarters (NDHQ). In 1970 the day-to-day control of the cadets was passed to the functional commands.

In 1977 a new uniform (dark green to match the colours of the post-unification Army uniforms) was issued to Army Cadets, replacing the wool tunics, pants and putties.

ARMY CADET SUMMER TRAINING CENTRES

Throughout the history of Army Cadets, summer training camps existed across Canada. Most camps were about 10 days long and provided an opportunity for collective training in sports, signaling, marksmanship and drill. The Canadian Technical Trades Training Corps was formed June 4th, 1943. It enrolled young men of 16 for training as electricians, machinists, draftsmen, surveyors, clerks, and auto mechanics; so that they could complete trades training by 19 and

be directly enrolled into the Canadian Army. This program was adopted by the emerging Army Cadet Camps as a model for training.

IPPERWASH ARMY CADET CAMP

In the summer of 1943, Army Cadet Camps were organized in eleven locations across Canada. In the summer of 1947, the first six-week camp was held at the Ipperwash Military Camp on Lake Huron, North of Sarnia, Ontario. Cadets attended Basic Training, Signaling, Driver-Mechanics, and Senior Leaders courses.

In 1994, because of a First Nation land claim, the Ipperwash Army Cadet Camp moved to Canadian Forces Base Borden, and was renamed the Blackdown Army Cadet Summer Training Centre.

BANFF NATIONAL ARMY CADET CAMP

The National Army Cadet Camp was established in 1949 at Banff, Alberta, as a reward for cadets who had completed their Master Cadet requirements. Leadership training was stressed along with the outdoor challenges of mountaineering, all within the territory of Banff National Park.

In 1999, the facilities at Banff were closed and the Rocky Mountain National Army Cadet Summer Training Centre was established nearby in Cochrane, Alberta. The Leadership and Challenge Course remains the premier training course for Army Cadets.

VERNON ARMY CADET CAMP

Vernon Army Cadet Camp conducted its first 6 week Army Cadet courses the summer of 1949. Along with trades training, courses were held in life saving, hunter safety and music. Cadets were also offered opportunity to write, or rewrite high school exams. The camp has since been renamed Vernon Army Cadet Summer Training Centre.

ARGONAUT ARMY CADET CAMP

As early as the 1930’s, cadets in Atlantic Canada attended summer training at places like Camp Utopia, New Brunswick, and Camp Aldershot, Nova Scotia. Camp Argonaut, now called Argonaut Army

Cadet Summer Training Centre, was established at CFB Gagetown in 1972. It's still a mystery where the camp got its name.

VALCARTIER ARMY CADET CAMP

Summer training at BFC Valcartier started in 1968 with cadets attending 2 and 6 week course (CL, CLI, and specialty training in marksmanship, physical education and driving). In the 80's Valcartier was home to the pre-course for the Basic Parachutist Course, as well as Artic Indoctrination and Photography.A new facility was built in 1996 and renamed Valcartier Army Cadet Summer Training Centre. It is currently the largest Cadet Summer Training Centre in Canada with over 2 600 cadets attending each summer.

WHITEHORSE CADET CAMP

Whitehorse was chosen in 1973 as a summer training location for cadets from Canadian Forces Northern Area. In 1983 the camp was moved to its present location outside the city. The camp is in the wilderness, with easy access to mountain, hiking, river and lake training sites. In the early years, bears and moose were common visitors to the camp, including the parade square! WCC was renamed Whitehorse Army Cadet Summer Training Centre.

THE ARMY CADET LEAGUE OF CANADA

The integration of Canada's armed forces in the early 1970's caused some fundamental changes to the Army Cadet Organization. Prior to this the Cadet Services of Canada (CS of C) represented the movement at Army Headquarters on behalf of the sponsors, communities and cadet leadership. The CS of C, a sub-component of the Army Reserve with membership on the Canadian Defence Association, had considerable influence in cadet matters. The Air and Sea Cadets were represented by their respective leagues and consequently, pressure was applied to the Army for integrated conformity. The Army Cadet League of Canada was formed on 01 Apr 1971 to work with the Department of National Defence to assist in the administration of the Army Cadet movement.

The Charter of the Army Cadet League of is to carry out the following tasks:

a. to encourage and promote public interest in and support of the Royal Canadian Army Cadets;
b. to ensure that Army Cadet units are formed wherever appropriate and practicable and that each Army Cadet unit is effectively sponsored and supported within the community;
c. to consult with and advise the Department of National Defence and its appropriate subordinate headquarters in respect of development of policies and aims of the Royal Canadian Army Cadets;
d. to make recommendations to military authorities on the enrollment, promotion, and release of officers of the Cadet Instructor Cadre;
e. to collect, receive, hold and invest funds and property from contributions, gifts, grants, subscriptions or legacies, and to use such funds, subject to donors' directions, for the benefit of the Royal Canadian Army Cadets; and,
f. to establish branches of the Corporation in various parts of Canada, and to do all those things that are lawful and appropriate to accomplish the objects of the Corporation. Such objects to be carried out in more than one province of Canada.

RECENT HISTORY

On 20 Aug, 1985, at the National Army Cadet Camp in Banff, Alberta, His Royal Highness Prince Philip, Colonel-in-Chief, presented the Royal Canadian Army Cadet Banner, the Royal Canadian Army Cadet Pipe Banner and the Royal Canadian Army Cadet Trumpet Banner.

In 1987 the enrolment age was returned to 12 years old. In 1999 the Army Cadet program was updated to its modern form, and “Adventure and challenge” were as the principle elements of Army Cadet training. Updated Cadet Reference and Pocket Books were completed in 2001.

EO 402.09: IDENTIFY CANADIAN, PROVINCIAL, TERRITORIAL AND ARMY CADET FLAGS

NATIONAL FLAG

Rules for flying the national flag:
a. when flown in a group, no flag should be higher than the national flag;
b. the national flag should be raised first and lower last;

c. when three flags are flown together, the national flag should be in the centre;
d. in a group of 2, or 4 and more, the Canadian flag should be flown on the left as you face them;
e. when more than one flag is carried on parade, the national flag must be flown on the marching right or in the centre ahead of the others;
f. when hung on a wall, the flag is vertical with the stem pointing right;
g. when flown at night it must be illuminated; and,
h. during periods of mourning, the national flag is half-masted by raising it to the top, then lowering it to half way.

A worn, faded, or damaged flag should be burned privately.

On Remembrance Day, 11 Nov, the national flag is lowered to half-mast on the Peace Tower of the Parliament Buildings. The United Nations flag is flown with the national flag at the Peace Tower on United Nations Day, 24 Oct.

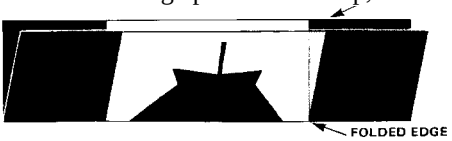
When the Queen is in Canada, her personal flag (below left) is flown day and night over the building in which she is in residence, and at ceremonies she attends. The same is done with the governor General's Flag (below right) when the GG is present.





How to fold the national flag:

a. fold the bottom of the flag up to meet the top;



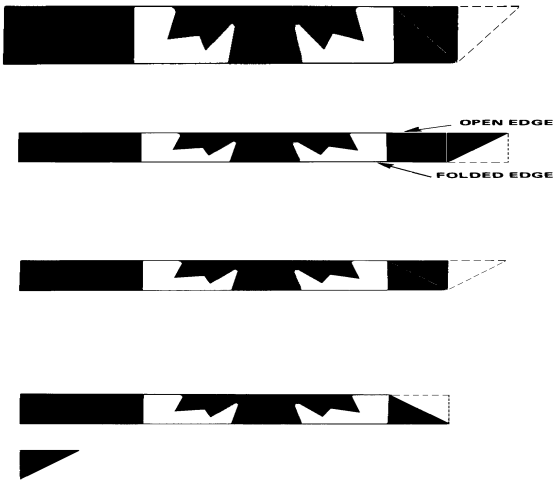
b. take the folded edge and bring it up to meet the open edge;



c. starting at the right side of the flag, make a triangular fold from the folded edge to the open edge; and,



d. take the point and fold it parallel to the open edge in order to make a second triangle – continue over the entire length of the flag. The result should be a single triangle



PROVINCIAL, TERRITORIAL AND ARMY CADET FLAGS



Newfoundland, 28 May 1980



Quebec, 9 March 1950



Prince Edward Island, 24 March 1964



Ontario, 21 May 1965



New Brunswick, 24 February 1965



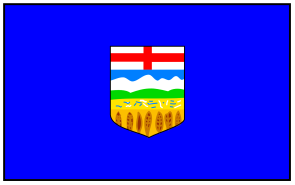
Manitoba, 12 May 1966



Nova Scotia, 1625



Saskatchewan, 31 March 1969



Alberta, 01 June 1968



Nunavut, 01April 1999



British Columbia 31 March 1906

RCAC Banner, 20 August 1985





Nortwest Territories, 01 Januiary 1969

The RCAC Flag, May 1972





Yukon, 01 December 1967

The Army Cadet Camp Flag, 1957



EO 402.10 LIST NCO DUTIES AND RESPONSIBILITIES

DUTY

A duty is something you must do because of the position you hold. For example, it is your duty as a leader to report to your officer any injuries suffered by you or your cadets during a cadet activity.

RESPONSIBILITY

Responsibility is being accountable for what you do. Any duty you have because of the position you hold in the unit includes a responsibility to do that duty. You, as a NCO, are also responsible and accountable for what your subordinates do, or fail to do. You are, therefore, responsible for fulfilling not only your individual duties, but you are also responsible for seeing that your subordinates perform their duties. For example, if you are a section commander, it is your responsibility to ensure that your subordinates perform their duties effectively. This makes you responsible and accountable to your Platoon 2 I/C who is, in turn, responsible to the Platoon Commander. The amount of responsibility delegated to you depends on the position you hold, and your own willingness to accept responsibility. Responsibility can be delegated, but it is never abdicated.

DUTIES AND RESPONSIBILITIES OF AN NCO

Duties and responsibilities can be either clearly stated policy, or implied. The Cadet system is governed by several written policies:

a. Cadet Administrative and Training Orders (CATO's);
b. Queens Regulations and Orders – Cadets;
c. Cadet Harassment and Abuse Prevention Program (CHAP) Rights and Responsibilities;
d. Canadian Forces and Federal Government policies;
e. Federal and Provincial/territorial law; and,
f. Regional Orders and directives.

In addition to written policies, responsibilities are understood through an understanding of military tradition and division of labour practices.

General responsibilities of a NCO:

a. supervision, control, motivation and discipline of subordinates;
b. personal and professional development of your subordinates;

c. support and implementation of policies established by the chain of command;
d. good character and vigilance;
e. show respect towards superiors and subordinates;
f. use appropriate language at all times;
g. the well-being of your subordinates;
h. communication of orders, instructions and feedback in both directions of the chain of command;
i. the appearance and condition of training sites;
j. be an instructor, coach, mentor and leader; and,
k. endeavor to increase your own skills and knowledge.

It is often said that the NCOs are the backbone of any military unit or cadet corps. It is your duty as an NCO to ensure that all tasks handed to you are completed to the best of your abilities. By carrying out your duties in a responsible and professional manner you are demonstrating your support of the officers, to the cadets. By setting a good example in this regard, your cadets, in turn, will give you their respect.



In your capacity as an NCO, you will often find that you link the ideas and plans of your officers to the activities carried out by the cadets. This go-between position is one of your most important functions because all

communications between the officers and the cadets (and vice versa) must pass through you.

THE REGIMENTAL SERGEANT-MAJOR (CWO)

The regimental Sergeant Major (RSM) is immediately under the orders of the Corps CO, to whom the RSM is responsible for the regular performance of duties.

RSMs hold one of the most responsible positions in the corps. Everything relating to drill, the discipline and duties of NCOs is under their supervision. They will supervise the NCOs in their duties and encourage young NCOs to seek advice. An RSM must be acquainted with the character and capabilities of every NCO of the corps, and be prepared to make recommendations to the CO regarding summer courses and promotion. The RSM will be present at all inspections by the CO, informed of any unusual occurrence that comes to their knowledge, affecting the discipline and welfare of the corps. The RSM should be an example to all in dress, personal appearance and conduct.

DUTIES AND RESPONSIBILITIES OF AN OFFICER

What do officers do and how do they differ from NCOs? The most obvious distinction is the commission scroll that is earned by officers from Her Majesty the Queen. The commissions scroll is the Queen's way of investing Her authority in officers; a way of passing on Her responsibilities in military matters. CIC Officers have the primary responsibility of ensuring a safe training environment, free from undue stresses, hazards and harassment or abuse.

OFFICER	**NON-COMMISSIONED OFFICER**
The officer commands, establishes policy and plans the work of the corps.	The NCO carries out the daily routine of the cadet corps within the guidelines passed down by the officers.
The officer concentrates on collective training of the corps.	The NCO concentrates on individual training of the cadet.
The officer is responsible for personal interviews, career progression and counselling of NCO and cadets.	The NCO is responsible for looking after the welfare and development of the cadets in his/her charge.

The officer concentrates on the cadet corps, effectiveness and efficiency in accomplishing each planned activity.	The NCO concentrates on the continued individual development of the cadet ensuring that each one is well-trained and highly motivated.
The officer pays particular attention to standards of performance and training of NCOs.	The NCO concentrates on standards of performance and training of cadets.
The officer makes time and other resources available so that the NCO can do his/her jobs.	The NCO gets the job done.

RELATIONSHIP BETWEEN OFFICERS AND NCO'S

A NCO is the link between the Officers and the Cadets. It is a relationship based on trust, loyalty and co-operation. They have different duties but the same aim of an efficient and effective corps, able to train tomorrow's leaders in a safe environment. Any army cadet corps will organize a multitude of activities over the course of the school year. The best and easiest way to ensure that all goes well is a sharing of workload between the officers and cadet NCOs. This fair and equitable sharing is based on a division of the duties and responsibilities between the two groups of leaders within the corps.

It is important to remember that a harmonious working relationship can be more important than a strict set of duties. For example, if the platoon commander is scheduled for a meeting with the CO but is unable to get to the corps, the platoon WO should be ready to attend. An officer and an NCO complement each other in their duties in order to get the job done. Sharing of the work-load and sharing of the hardships makes for an efficient and professional organization.

EO 402.11 LIST DECORATIONS, MEDALS AND AWARDS OF THE CANADIAN FORCES

Anatomy of a medal or decoration:

a. The colour of the ribbon is different for each decoration or medal. When not wearing a full medal, a recipient will wear a small ribbon in it's place;

b. Decorations and medals are often engraved with the recipients name on the back or edges;
c. Bars, numbers or clusters on some decorations indicate repeat awards of that decoration or medal;
d. Many decorations and medals allow a recipient to place the initials of the award behind their name in official correspondence; and,
e. Each decoration or medal has it's place, or 'precedence.' This indicates which order, from center to outside, and from top to bottom, that they are worn, when a recipient has been awarded more than one.

THE EVOLUTION OF CANADIAN MILITARY HONOURS (ORDERS, DECORATIONS AND MEDALS)

At the beginning of this century Canada was a self-governing dominion within the British Empire. As the country evolved into an independent state, suggestions for the development of its own honours system grew. However, there was little early incentive to move beyond the simple policy decision that Canadian citizens could not accept knighthoods or similar British honours which granted aristocratic titles. British orders, decorations and medals, from the lowest awards to the Victoria Cross, continued to be used, including during wars, when Canadian contingents formed part of deployed British forces. Limited steps towards creating Canadian Military honours were taken in the middle of this century, beginning with a few unique medals during the Second World War. After the war, a common medal for military long service and exemplary conduct was created, the Canadian Forces Decoration. This was followed by a special campaign medal for service in the Korean Conflict, a uniquely Canadian version of the Commonwealth's award issued at the behest of our government.
The watershed in the conversion to national honours occurred with the Centennial of Confederation in 1967. Initial awards created at that time were followed by a deliberate expansion of the Canadian honours system in 1972. Since then, practice, experience and study have led to continued growth in the national system for recognizing the merit and deeds of those who serve Canada.

A national honours policy exists to guide the development of the system. One guiding principle for military honours is that proposals for new awards are always made in consultation with the Canadian Forces, which are regularly consulted on such issues. That is, the views of

those who would actually qualify for and be honoured by each award are given great weight.A Canadian Forces Honours Committee, representing all components of the Forces, studies these matters in depth and is careful to maintain the high standards established in the past.

All Canadian national honours and their criteria are personally approved by the Sovereign, The Queen of Canada.

VICTORIA CROSS

The Victoria Cross "shall be awarded for the most conspicuous bravery, a daring or pre-eminent act of valour or self-sacrifice or extreme devotion to duty, in the presence of the enemy". For the purpose of these decorations, "enemy" is defined as a hostile force, including armed mutineers, armed rebels, armed rioters and armed pirates. Canada does not have to be at war to acknowledge the existence of an enemy which fits this description. It is broad enough to encompass Canadian involvement in UN peacekeeping operations. As part of the Canadian honours system, a family of three Military Valour Decorations, comprising the Victoria Cross (VC), the Star of Military Valour (SMV) and the Medal of Military Valour (MMV) has been designated and styled. These medals have been incorporated into the Canadian honours and awards system to enable Canada to recognize members of the Canadian Forces, or members of an allied armed force serving with or in conjunction with the CF, for deeds of military valour.





The highest British and Commonwealth decoration, the Victoria Cross, has traditionally been recognized as the most prestigious award for gallantry under enemy fire. The original British VC (above left) was made from cannons captured from the Russians during the Crimean War. It was instituted on 05 February 1856 with awards retroactive to 1854. The first award to a Canadian was in February 1857, to Lt. Alexander DUNN (Charge of the Light Brigade). The recipient's rank, name and regiment are engraved on the reverse of the mounting bar and the date of the act engraved on the back within a raised circle.

A formal request for the creation of a family of Military Valour Decorations was approved by Queen Elizabeth II on February 2, 1993. The Canadian version of the Victoria Cross (above right) has the Latin inscription "PRO VALORE" in place of the English – only "FOR VALOUR" found on the British VC.

There have been 1,351 Victoria Crosses and 3 Bars awarded worldwide, 94 to Canadians (Canadian-born or serving in the Canadian Army or with a close connection to Canada).

STAR AND MEDAL OF MILITARY VALOUR



The Star of Military Valour is the second highest Military Valour Decoration of Canada. It "shall be awarded for distinguished and valiant service in the presence of the enemy." The Medal of Military Valour cou also be awarded for similar circumstances.

The reverse of both medals shows the Royal Cypher and Crown with the inscription "PRO VALORE". On the Star, the rank and the name of the recipient is engraved below the "PRO VALORE" inscription. On the Medal, the rank and the name of the recipient are engraved on the edge.

The Cross of Valour (not shown) is awarded only for *acts of conspicuous courage in circumstances of extreme peril.* All Canadian citizens, both civilians and members of the Canadian Forces, are eligible for the award.

COMPANION, OFFICER AND MEMBER OF THE ORDER OF CANADA



The Order of Canada established as the centrepiece of Canada's system of honours to pay tribute to those who exemplify the highest qualities of citizenship and whose contributions enrich the lives of their contemporaries. Only Canadian citizens are eligible to be members of the order. The Queen of Canada is the Sovereign Head of the order and the Governor-General is the Chancellor and the Principal Companion. The order has three levels: Companion, Officer and Member (above from left to right). The order is not awarded posthumously. On the front of the medal is a maple leaf in red, gold or silver with an annulus which bears the motto DESIDERANTES MELIOREM PATRIAM, “they desire a better country.” On the back, the word CANADA within a circle and a serial number in a box below. The badges are unnamed, but each badge is numbered on the reverse.

Instituted 17 April 1967 with the first members appointed 01 July 1967, the original order had only Companions and a Medal of Service. On 01 July 1972, the Medal of Service was deleted and all holders were made Officers of the order. The levels of Officer and Member were introduced on 01 July 1972.

Companion (CC) Awarded for outstanding achievement and merit of the highest degree, especially service to Canada or to humanity at large. Only fifteen Companions may be appointed in any one year with a maximum of 150 living Companions at any one time. The recipients may use the post-nominal letters CC.

Officer (OC) For achievement and merit of a high degree, especially service to Canada or humanity at large. A maximum of 46 Officers may be appointed each year and there is no limit on the number of Officers living at any one time. Officers may use the post-nominal letters OC. Members may be elevated to Officers and Officers may be elevated to Companions but they hold only the rank of the elevation.

Member (CM) For distinguished service in or to a particular locality, group, or field of activity. A maximum of 92 Members may be appointed annually with no maximum number living at any one time. A Member may use the post-nominal letters CM.

MERITORIOUS SERVICE CROSS AND CANADIAN FORCES DECORATION



The Meritorious Service Cross (above left) can be awarded militarily or civilly, for the performance of a deed or activity in an outstanding professional manner or of an uncommonly high standard bringing considerable benefit or great honour to Canada.

The Canadian Forces Decoration (above right) is awarded to officers and men of the Canadian Forces who have completed twelve years of service. The medal is awarded to all ranks, who must have a good record of conduct during the final eight years of claimed service. The medal is awarded to the regular forces, reserve forces and to officers to the Cadet Instructors Cadre (CIC). Service in the regular and reserve of auxiliary forces of the British Commonwealth of Nations will be counted towards the medal if the final five years have been with the Canadian Forces and no other long service, good conduct or efficiency medal has been awarded for the same service. The service need not be continuous. A bar is awarded for every subsequent period of ten years of qualifying service. Initiated on 15 December 1949, and first awarded on 01 September 1951, about 157 000 have been awarded.

UNITED NATIONS MEDALS, THE CANADIAN PEACEKEEPING SERVICE MEDAL





Canadians have served in United Nations (UN) peacekeeping missions in over 25 countries around the world, including 30 years in Cyprus (medal seen above). Each UN medal is distinguished by its ribbon colours.

The Canadian Peacekeeping Service Medal (above right, front and back) is awarded for peacekeeping service on missions dating back to 1947.

The three figures on the obverse of the medal are those depicted on the top of the Peacekeeping Monument, officially dedicated in Ottawa in 1989. The three figures show an unarmed observer, with binoculars, and two Canadian Forces soldiers. The kneeling figure with the radio is a woman. These three figures depict the purpose of this medal, which is service with international peacekeeping or observer missions. Above them flies a dove, symbolic of peace in many countries of the world.

The ribbon is comprised of four colours, green, red, white and United Nations blue. These colours were chosen to represent the following: United Nations blue and white – the colours of the United Nations, the organization under which the majority of international peacekeeping and observer missions have occurred; Red and white – the Canadian

flag and Green – volunteerism. In addition, the red and white have secondary meanings. White is associated with purity and peacekeeping is certainly one of mankind's highest ideals. The red is also symbolic of the blood that has been shed by Canada's more than 100 fallen peacekeepers.

Almost 125,000 Canadian personnel have served in peacekeeping missions over the past 53 years. This record is unsurpassed by any nation. This tradition in the "service of peace" continues today.

WAR MEDALS



The Victory Medal (above left) was awarded to all ranks of the fighting forces, to civilians under contract, and others employed with military hospitals who actually served on the establishment of a unit in a theatre of war between 05 August 1914 and 11 November 1918 (inclusive). It was also awarded to members of the British Naval mission to Russia 1919 – 1920 and for mine clearance in the North Sea between 11 November 1918 and 30 November 1919. The medal was authorized in Britain (and for Canadians) on 01 September 1919. There were 351,289 medals awarded to the Canadian Expeditionary Force (of the 5,725,000 total issued).

The 1939-45 Star (above, second from left) was awarded for six months service on active operations for Army and Navy, and two months for active air-crew between 02 September 1939 and 08 May 1945 (Europe) or 02 September 1945 (Pacific). Canadians received 305,000 stars. Additional medals were awarded for participation

within specific theatres of the war, Italy Star, Northwest-Europe Star, etc.

The Canadian Korea Medal (above, third from left)was awarded to Canadian military personnel for one day on the strength of an army unit in Korea; or 28 days afloat; or one sortie over Korea by a member of the RCAF, 02 July 1950 – 27 July 1953. A bronze oak leaf emblem is worn on the ribbon by those mentioned-in-despatches. On the back, the Hydra-headed monster of mythology being destroyed by Hercules is depicted, with the word KOREA at the bottom. The recipient's name is engraved on the rim with regimental number. The medal was instituted in 1951 and there have been 15,000 issued to Canadian military personnel.

The Gulf and Kuwait Medal with bar (above right) was awarded to:

(a) all members of the Canadian Forces who served a minimum of 30 cumulative days in theatre (between 02 August 1990 and 27 June 1991), on, or in direct support of, operations to defend against aggression and to liberate Kuwait; and
(b) those who served for one day or more in the theatre of operations during actual hostilities (16 January 1991 to 03 March 1991).

PO 402.12 COMPLETE A PARADE STATE

The Parade State is your primary record of cadet attendance and participation in training activities. A record of attendance is not only a formal accounting for the cadets in your charge, but it is a useful tool in showing long term participation and trends.

ROLL CALL AND ATTENDANCE

As a Platoon/Section Commander –form up the platoon/section a few minutes before opening parade and call the roll. Mark down the attendance of each cadet using the roll-call book. Once this is done, give a run-down of the evening's schedule, do a quick inspection of the uniforms and get organized for opening parade. Once the RSM marches onto the parade square and asks each platoon/section to report their numbers, call out, "All present or accounted for, Sir," This information will then be passed on to the officer on parade. Once opening parade is

complete, the duty NCO will collect the roll-call books and tabulate the parade state.

FILLING IN A PARADE STATE

1. Enrolled strength – these are the number of cadets and officers currently enrolled with the corps, located at row 4 on previous week's parade state.
2. Taken on strength – number of new cadet who have joined the corps since the last parade (added to row 1).
3. Struck of strength – number of cadet who have aged out or quit since the last parade night (subtracted from row 1).
4. Total parade strength – number of person on strength with corps (do the math rows 1-3).
5. Leave of absence – cadets that are not on parade and have permission for missing cadets.
6. Sick parade – cadet that are not in attendance due to illness.
7. On course – cadets who are away on a specialty course.
8. Attached to another unit – cadets that are working with another corps.
9. Absent without leave – cadet whose location is unknown.
10. Parade strength – represents the total number of cadets on parade (row 4 subtract numbers from rows 5-9).

EXAMPLE: PARADE STATE BLANK AND COMPLETED

Cadet Corps

Parade State

Date: _____

Status / Ranks	Maj	Capt	Lt	2Lt	OCdt	CI	CWO	MWO	WO	Sgt	MCpl	Cpl	Pvt	Rec	Total
1. Enrolled strength from previous parade state:															
2. Taken on strength (TOS):															
3. Struck off strength (SOS):															
4. Total cadet corps strength:															
5. Leave of absence:															
6. Sick parade:															
7. On course:															
8. Attached to another unit:															
9.															
10. Absent without leave (AWOL):															
11. On Parade:															

Tabulated by: _____ Verified by: _____

Cadet Corps 2493

Parade State

Date: 28 May

Status / Ranks	Maj	Capt	Lt	2Lt	OCdt	CI	CWO	MWO	WO	Sgt	MCpl	Cpl	Pvt	Rec	Total
1. Enrolled strength from previous parade state:		1	2	Ø	1	1	1	1	2	4	6	4	11	16	50
2. Taken on strength (TOS):											Ø		Ø	2	+2
3. Struck off strength (SOS):											1		1	Ø	-2
4. Total cadet corps strength:		1	2	Ø	1	1	1	1	2	4	5	4	10	18	=50
5. Leave of absence:												1			1
6. Sick parade:													1		1
7. On course:			1												1
8. Attached to another unit:					1			1	1	1	2				6
9. transfer to CC 2675, PQ.										1					1
10. Absent without leave (AWOL):													2	3	5
11. On Parade:		1	1	Ø	Ø	1	1	Ø	1	2	3	3	7	15	35

J. Carroll
Cpl. Carroll
Tabulated by:

CWO Covington
Verified by:

PO 402.13 WRITE A MEMORANDUM

1. **THE ABC'S OF MILITARY WRITING:**

a. Accuracy – memo should be precise, accurate, truthful so it portrays your situation;

b. Brevity – be as brief as possible, but do not leave out key facts; and,

c. Clarity – use short, concise sentences with plain words. The reader must fully understand want you want when she/he gets to the end of the page.

2. **MEMORANDUM:**

This is considered the most common form of written communication for **inter-office** use within the military. For example, memos can be sent to anyone within your corps, affiliated unit of your local cadet detachment. It is considered an **internal** form of correspondence (internal to the Department of National Defence).

a. General formatting rules:
 1) use 8 1/2 X 11 paper;
 2) all parts to be left justified;
 3) MEMORANDUM to be at the top in capital letters;
 4) space to be between all elements;
 5) use standard abbreviations, and,
 6) pages are to be numbered.

b. Components:
 1) head section includes – file number/suffix, date, addressee, and subject line. An example;
 2) Body includes – references and text; and,
 3) Close section includes – signature block (left) and minute (centre).

3. **MINUTE:**

a. are written replys to memos;

b. to use a minute – write 1 with a circle around it at the top; and,

c. write a 2 with a circle around it in the bottom, indicate who the comments are directed, write your brief comments, and close with a signature block followed with the date.

EXAMPLE: MEMORANDUM AND MINUTE

EO 402.03 Gold
The Memorandum
Handout #4

MEMORANDUM (1)

1085-70-1 (RSM)

1 Apr 93

SupO

REQUEST FOR EQUIPMENT IN
SUPPORT OF ANNUAL INSPECTION PARADE

Ref: Meeting CCWO White - Capt Black 28 Mar 93

1. As reference, I was tasked with the organization of the demonstration phase of the annual ceremonial review. I request the following equipment to complete this task:

a. oil for the screwdriver;

b. 3 arctic tent holes;

c. the key for the parade square;

d. a sky hook; and,

e. a bucket of steam.

2. I need to sign for this equipment during the week of 12 Apr 93 at your convenience. This memo will go on file for next year.

Charles White

C. White
CCWO
RSM

(2) RSM
The sky hook is broken and will not be used until next year. Remainder of equipment can be picked up on 13 Apr at 1300h.

Paul Grey
P. GREY
LT
SUP O
3 APR 93

Head Section

← File Number/Suffix

← Date

← Addressee

← Subject Line

Body
← References

← Text

Close Section

← Signature Block (left)

← Minute (center)

When writing external letters and correspondence outside of the military, the basic principals of writing are the same.

a. General formatting rules:
 1) use 8 1/2 X 11 paper;
 2) all parts to be left justified;
 3) 2 spaces to be between all elements, and,
 4) pages are to be numbered. i.e. 1/3, 2/3, 3/3 etc.

b. Components:
 1) write who you are (name and title) and your address;
 2) file # (if applicable or replying to a memorandum);
 3) date in full;
 4) name, title and address of whom you are writing to;
 5) Dear Mr., Mrs., Miss or Sir, Madam;
 6) body of letter;
 7) closing paragraph;
 8) signature block, initials only;
 9) rank;
 10) title or appointment; and,
 11) area code and phone number (optional).

When writing external correspondence, use common sense and judgement. You want your letter to be professional. Make sure that you always use correct grammar and punctuation, and check your spelling. Full names, titles and dates are used for external correspondence.

Writing correspondence it does not have to be a scary thought, but it may be difficult to grasp at first. After your first few memos you will get the hang of it.

EXAMPLE: EXTERNAL CORRESPONDENCE

(Letterhead)

Captain Sean Q. McDonald
Commanding Officer 557 R.C. (Army) C.C.
123 Here Street,
Anytown, ON 1A2 B3C

23 October 2000

Chief Clancy Wigwam
Police Chief – Springfeld Police Department
123 There Street
Springfeld, XX 12345

Dear Sir,

I want to thank you and your staff on behalf of 557 R.C. (Army) C.C. for the tour of the police station. You and your staff were very helpful in the education of the cadets on police duties, procedures and functions.

Many of the cadets liked the tour of the "holding cells" and of course the police service dogs demonstration. The doughnuts and refreshments were also very good.

Once again thank you and your staff for your time and generosity.

Sincerely,

S.R. McDonald
Captain
Commanding Officer

NOTES:

NOTES:



Bushcraft 403

PO 403 BUSHCRAFT

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INTRODUCTION

The skills and knowledge of Bushcraft are some of the key elements in the Army Cadet training program. Many of the greatest challenges and rewards in this program will occur in adventurous outdoor training. Once you are confident in outdoor safety, survival and trekking skills, you will be prepared to fully explore and discover our vast and remote Canadian wilderness.



WILDERNESS JOURNAL

Start now to keep a written record of your adventures and experiences. Keep copies of routes that you travel, write down stories or anecdotes, and draw pictures of the animals, plants and scenery you encounter. Record your favourite, and least favourite, places, people and events and the lessons that you learn from the experience. At the end of your cadet career this journal will tell a wonderful story.

EO 403.01: SELECT PERSONAL CLOTHING AND EQUIPMENT

WEATHER AND SEASONAL CONSIDERATIONS

When you select your personal clothing and equipment for an outdoor activity, the elements of weather and season will have a significant impact on your choices. Air temperature, wind, precipitation, altitude, humidity and the UV index are elements of weather that will need consideration. Your local media, or Environment Canada, will offer weather forecasts that are moderately accurate for your area for short periods of time (2-3 days). You can also research weather averages, highs and lows for the area you plan to travel to for your activity. Remember that weather is not constant or 100% predictable.

When you are in the outdoors keep your eyes open for changes in your environment that could lead to weather changes, and be ready to adapt your clothing and equipment choices. Changes in air temperature, air pressure, wind direction or cloud cover often signal upcoming weather changes. More people die from being improperly prepared for weather changes than any other cause in the outdoors.

CLOTHING

Clothing that you wear for outdoor activity must protect you from sun, wind, rain and snow, variations of temperature and insects.

The components of outdoor clothing can be identified as:

a. **hat** – your hat should be wide brimmed for sun and rain protection, with holes for ventilation;
b. **shell** (jacket) – your shell is your primary protection from wind and rain or snow and keeps your insulation layer dry. It should be long enough to reach your thighs. It should have a hood as well as wrist, neck and waist closures that you can loosen or tighten to allow ventilation. You need to remember that moisture can also come from inside your clothes as you perspire in warm weather or while you are participating in strenuous activities. You can control the build up of moisture in your clothes by wearing a shell that is made from a waterproof breathable fabric and has extra ventilation openings under the armpits. The extra vents and the ability of the material to allow moist air out without allowing rain in helps keep you dry. Also look for a shell that has a zippered opening in the front and has no permanent insulation layer attached to it. You may also choose a pair of wind or rain pants to compliment the protection of your shell;
c. **insulation** – you will want to have appropriate insulation for the coldest weather expected during your activity outside. The best method of insulating yourself is to have several thin layers of insulative clothing as opposed to one thick layer. The thin layers will allow you to adjust the amount of insulation you have on at one time, and add or subtract as the temperature or your physical activity changes. The air space created between the layers is excellent insulation! Wool, and the more lightweight synthetic fleece materials, make good insulators because they maintain their insulative capacity even when wet. Be sure the insulation layers you choose fit under your shell, and that they insulate your neck, shoulders, torso and lower back. Insulation for your legs should be chosen with the type of activities and the lowest expected temperature in mind;
d. **shirt** – in warm weather you will need a long sleeve shirt to protect you from the sun and insects. The sleeves should have an elastic or adjustable cuff that can be rolled up if required. It

should have a collar that can protect the back of your neck and it should be made of a material that does not retain moisture;

e. **undershirt and underwear** – your undershirt can be one of your best methods of moving moisture away from your skin to assist cooling as well as keep you dry. Choose a shirt made with a "wicking" material – a material that draws moisture away from your skin and disperses it into your outer layers for evaporation. Your underwear should be comfortable and protect you from chaffing. It should be made of material that does not retain moisture. Your choice in comfortable and practical undergarments is almost as important as your choice of a shell;

f. **pants** – choose pants with full length legs that have closures at the cuffs and an adjustable waist. Large pockets that close securely and self-drain are added bonuses. Ensure that the waist will not roll or fold over when you carry a pack. The material should be durable and provide protection from sun and insects;

g. **socks** – wear socks that provide the appropriate amount of insulation required for your activity. Remember that your feet sweat as much as the rest of your body so choose socks of a material that will wick away the moisture as well as remain warm if they get wet. Comfort and practicality can be achieved by wearing a thin liner sock under your heavier protective sock. The two-sock system reduces friction on your skin and allows better ventilation. Avoid materials that retain moisture and choose socks that fit inside your footwear; and,

h. **footwear** – the activities you participate in will have a direct impact on your choice of appropriate footwear. The construction, style and material of your footwear will vary with terrain, temperature, weight carried, and speed of travel. For weekend hiking with a light to moderate pack weight along established trails you will need a light hiking boot, or shoe, made out of material that will dry quickly, with a firm but comfortable sole. Longer backcountry expeditions might require a solid hiking boot with extra arch, ankle and heel support. Trail running, orienteering and day hikes require running shoes, approach shoes or light hikers. Regardless of what footwear is appropriate for the activity you must allow time for break in. Breaking in footwear prior to a hike will go a long way to preventing blisters. Make sure that your boots and socks fit properly, there should be just enough room for your

toes to move a little forward (this allows room for your toes when you walk downhill).

In general, your clothing should be comfortable and loose fitting. Try all your individual items on before going out to ensure fit and that there is no damage or missing parts. Check your range of motion with all your layers on and be sure that you can reach and stretch without being bound by your clothes. You can complement your cold weather clothing with mitts and a toque made from a good insulator that sheds moisture. Keep all your clothes as clean as possible, repair and wash when required.

Moisture management is a technique of controlling moisture build-up in your clothes. Along with choosing appropriate outdoor clothing you can manage moisture by:

a. ventilating your clothing by opening cuffs, “pit zips” and the front zipper;
b. wearing clean layers that are loose that don’t retain moisture;
c. removing your hat when participating in strenuous activities – except when in direct sunlight;
d. choosing insulation that is appropriate to the temperature and activity, and adding or subtracting layers for changes as they occur; and,
e. keeping your socks clean and dry. Always carry extra socks, and change your socks regularly.

Remember “**COLD**” if you don’t want to be cold:

C – **c**lean clothes breathe and insulate better;
O – avoid **o**verheating by ventilating;
L – dress in **l**oose **l**ayers; and,
D – stay **d**ry.

PERSONAL EQUIPMENT

Your personal equipment is divided into two categories: objects that you carry in your pockets, and objects that find a place in your load carrying device.

Items you would ordinarily carry in your pockets are:

a. whistle (plastic);
b. folding pocket knife with a large (10cm) and small blade;
c. personal identification and medical insurance card;

d. map and compass;
e. matches;
f. survival kit;
g. lip balm;
h. notepad and pencil; and,
i. small flashlight.

Keep your knife blades sharp and remove or reverse flashlight batteries when storing your flashlight.

SLEEPING BAGS

Your choice of a sleeping bag has a lot in common with your choice of outdoor clothing. It must be the right size (length and width), have the appropriate amount of insulation for the coldest expected temperature, be made of a material that breathes and doesn't retain moisture, and have a good quality fastener (zipper).
Sleeping bag construction – the parts of a sleeping bag are:

a. **outer shell** – constructed from a light weight fabric, often nylon or polyester, it should be of sufficient weight and quality to protect the insulation layer;
b. **insulation** – sleeping bag insulation is divided into two categories: natural and synthetic. Natural insulation is usually waterfowl down – the short feathers closest to a duck's, or goose's, body that insulate the animal when in cold water. There is a variance in quality of down and the methods used to secure it in place inside the bag's inner and outer shell. Look for a bag with good quality down with the insulation held in place by "baffles" – dividers sewn between the two shells that keep the down in place. Down is the warmest and lightest insulation that can be found in a sleeping bag, however it loses almost all of its insulative value when it gets wet – and it is very difficult to dry in the field. Synthetic insulation comes in sheets and is secured between the shells in layers. Check how many layers of insulation are used and how they are attached. Some bags offer more insulation on the top than on the bottom. Avoid bags where the insulation is secured by sewing the two shells together creating seams where there is no insulation. Most synthetic insulation retains its insulative value when wet. Some synthetics are very light and warm – they make a better all-round choice than down for a general purpose sleeping bag;

c. **inner shell** – constructed from a light weight fabric. Look for an inner shell that doesn't retain moisture. Many inexpensive bags use cotton/flannel inner shells, which are comfortable, but not suitable for a trekking or expedition bag as cotton takes too long to dry;
d. **hood** – a part of the main bag that you can pull around your head in cold weather. This keeps your head warm without a build up of moisture from your breath in the bag;
e. liner – a thin bag you place inside your main bag to help keep the main bag clean and to offer a little more insulation;
f. **overbag** – a durable bag placed over your main bag to protect the outer shell, and to offer more insulation. Overbags made from waterproof and waterproof-breathable material can be used as mini-shelters – there are several good designs of these "bivi-bags" that have screened openings to protect your face from bugs and to allow some ventilation in warm weather; and,
g. **vapour barrier** – a non-permeable membrane designed to keep warm moist air created by your body inside the sleeping bag components. It is used only in temperatures below 0º.

Choosing a sleeping bag – check your bag size by getting in and moving around. You need some space for a liner and extra clothes in cold weather. Be sure you have enough room to move your arms to zip up from the inside, and enough room around your feet so that they can rest in a comfortable position. Bags come in three basic styles, each one offering their own advantages:

a. **rectangular bag** – the most common economical bag. The zipper often opens fully to create a double sized blanket. This style is roomy and can be useful for warm weather camping or indoor accommodation. The disadvantages as a bag for trekking or expeditions are numerous. The extra air space around your torso, legs and feet means that it takes more heat energy to heat up and keep the space warm. The extra material means the bag is bigger and heavier. There is no protection for your head in cold weather, and the liner materials used tend to retain moisture and odours;
b. **mummy bag** – named this because you resemble an ancient Egyptian mummy when you're in it! The bag tapers from the opening following the contours of your body closely. There is very little extra air space once you are in the bag. The zipper may only reach halfway down the side of the bag and it is protected by an insulated flap (called a "draft tube"). The

opening of the bag will have an insulated hood with a draw cord to pull the hood snug around your face to keep warm air in. Mummy bags for extreme cold will come with two separate bags, an inner and outer, that are used together. The mummy bag is certainly the warmest of the bag styles. The amount and type of the insulation will determine the overall bag weight; and,

c. **barrel bag** – this is a compromise between the efficiency of the mummy design and the economy of the rectangular bags. The shape tapers from the opening towards the foot, but is still considerably roomier than a mummy. Quite often there will be a hood with a draw cord, or at least an extension of one side of the opening that offers some head insulation. Depending on the insulation, this design is a good choice for spring, summer and fall camping.

Care of your sleeping bag – keep your bag clean! Do not eat while in or sitting on your sleeping bag. Repair rips and damage as soon as it happens. Protect your bag from moisture, water from outside and moisture created by your own body. Air out your bag after each night's use and do not sleep with your head tucked into your bag. When you pack your bag use a "stuff sack" and do just that – stuff the bag in, do not roll or fold it.

SLEEPING PAD

You need a layer of insulation between you and the ground when you sleep, especially in cold weather. As with the sleeping bag, choose a pad that is appropriate for the activity you are participating in and the weather you expect. The colder the ground temperature, the more insulation you'll need. Pads come in several length and designs:

a. **closed cell foam pad** – the foam is lightweight and doesn't absorb water. You can get foam pads in a variety of thickness, depending on your desired amount of insulation and comfort. Most foam pads are low priced and usually durable;

b. **air mattress** – rubber, vinyl or a combination of materials in a variety of thickness. Usually they're heavier than a foam pad, but offer good insulation when fully inflated. Disadvantages are that they are easily damaged, and they take a long time to inflate for use and deflate to pack. In cold weather, if you inflate your air mattress by mouth, ice crystals will form inside

from the moisture in your breath (later, in the warmth, the moisture will cause your mattress to rot); and,

c. **self-inflating foam-air combination pads** – these pads use foam as well as an adjustable valve to create a quick-to-inflate pad that has the insulative values of an air mattress with the convenience and light weight of a foam pad.

ACCESSORIES

Some small pieces of kit you should always carry in your pack:

a. stainless steel cup, knife/fork/spoon (KFS);
b. insect repellant and sunscreen;
c. a small tarp (at least 2m x 2m);
d. small trowel for digging;
e. sewing kit
f. a first aid kit; and,
g. hygiene products (as required).

EO 403.02: PACK AND CARRY INDIVIDUAL CLOTHING AND EQUIPMENT

LOAD CARRYING DEVICES

There are many devices made to assist you in carrying loads on your trek or expedition. Some of these devices are:

a. **backpack** (also known as a "rucksack");
b. **"load bearing vest" or "webbing"** – used primarily by military forces, webbing (small compartments attached to a common harness) and the vest allow soldiers to carry the essential pieces of their equipment with them at all times. Enough kit can be carried to support a person for 24 hours;
c. **canoe pack and "dry bags"** – used by canoeists to carry all their equipment in their canoe. The special features of a canoe pack are large volume and soft sides – to avoid damage to the canoe. Dry bags are specially constructed to be waterproof, even in the case of being capsized;
d. **barrel** – while voyageurs used to pack wooden hardwood barrels for trade and food supplies, modern plastic barrels for expeditions offer animal-proof and water tight storage for food and fragile equipment. Often, these are used in canoeing and expeditions in bear country; and,

e. **pack board and tumpline** – are two traditional load carrying devices for carrying heavy loads. The pack board is carried balanced on your shoulders and upper back, a tumpline (a band from the top of the load around your forehead) assists in keeping the balance of the load high and resting on your bone structure. The combination pack board with tumpline is still common with traditional porters and canoeists (for portaging heavy loads).

BACKPACKS

The common parts of backpacks are:

a. harness – includes backplate, shoulder straps and sternum strap;
b. hip belt;
c. frame – internal or external; and,
d. bag.

The two common backpack designs are:

a. external frame; and,
b. internal frame.

EXTERNAL FRAME BACKPACK

External frame backpacks are constructed with a bag attached to a visible metal or resin frame. Some external frame packs offer a frame that adjusts in length, however most are not adjustable. It is important to choose a frame that is the correct size. Try the pack on and ensure the hip pads and hip belt rest snugly on your hips – the shoulder straps should connect to the harness at the same level as your shoulders.

External frame packs have the advantages of:

a. adaptability of components – bags can interchange and you can add objects from one person's pack onto another's (great if one of your teammates is having trouble and you want to help carry some of their kit);
b. you can carry large and awkwardly shaped objects;
c. the bag and cargo does not press against your back, offering ventilation and a comfortable carry;
d. frames can be used to make an emergency stretcher; and,
e. heavy objects are easily attached close to the shoulders.

The disadvantage of this frame is that the pack is very rigid and the load is held higher up your back, raising your centre of gravity.

These characteristics make an external frame pack great for novice trekkers, and for carrying heavy loads over worn trails and fairly level terrain.



External frame pack

INTERNAL FRAME BACKPACK

Internal frame packs are constructed with a resin or aluminum frame sewn into pockets in the harness of the bag. Often the frame consists of two “stays” running vertically along the backplate. Aluminum stays are meant to be moulded to the shape of your back. The bag is designed to carry all your gear internally with only pockets and accessories attached to the outside. Some smaller packs may offer the option of attaching a sleeping bag stuff sack to the top or bottom. Like the external frame packs, it is important to correctly size your internal frame pack. Some models offer a range of pack sizes and some offer adjustable or replaceable stays.

The opening to the bag is an important feature. A small opening aids in weatherproofing but makes packing and unpacking more difficult. A wide opening is handy but the longer zippers or extra fasteners are

often more prone to trouble. Be sure that the zipper or fastener for the opening(s) is not at a place that will receive a lot of stress when the bag is packed and carried. If the zipper breaks you might not be able to close the bag! Most larger bags will offer two or more compartments inside the pack. This will assist you in placing heavier items in the proper place, and keeping all your kit organized.

The benefits of an internal frame pack are:

a. comfortable harness that can be adjusted and moulded to you;
b. a bag that holds its load close to your back and close to your centre of gravity;
c. easy to pack bag; and,
d. the lack of projections and protrusions from pack make trekking in forests and through tight spaces easier.

The disadvantages of this design are:

a. hard to move equipment from one person to another;
b. hard to carry large or awkward objects;
c. with the backplate pressed against your back, care must be taken while packing to pad sharp or hard objects; and,
d. ventilation is restricted across your back.

These characteristics make internal frame packs a good choice for treks with light to medium weight packs through forest or hilly terrain. Internal frame packs are excellent for climbing and mountaineering where range of motion and a lower centre of gravity are important.



Internal frame pack

HOW TO WEAR YOUR RUCKSACK

You must take the time to adjust all the features of your pack before heading out into the wilderness. Get a teammate to assist you when putting on your pack – it will be easier to adjust properly with a helping hand.

Shoulder straps:

a. check shoulder straps for length – padding should cover across shoulder and down front of chest;
b. some shoulder straps offer a tensioning strap at the top of the shoulder that is used once the pack is on to draw the top of the frame closer to the shoulders;
c. some straps offer a quick release feature on one or both shoulder straps (hip belts as well). These are especially handy if you have fallen into water, or you are in an emergency and you need to get the pack off immediately. Quick releases are not for routinely taking off your pack;

d. only tighten the shoulder straps enough to hold the pack to your back. They are designed to work cooperatively with the hip belt to support your pack; and,
e. a sternum strap connects the two shoulder straps together. Because the hip belt takes most of the weight, your shoulder straps may wander towards the outsides of your shoulders. The sternum strap holds the shoulder straps in place.

Hip belt:

a. wear the hip belt snugly around your hips, not your waist;
b. when putting on your pack, tighten your hip belt first, then your shoulder straps – this ensures that the weight is resting on your hips; and,
c. you can attach a water bottle holster to your hip belt.



PACKING

General rules:

a. fasten all pocket covers and do not let anything hang or dangle from the outside of your pack;
b. place a plastic garbage bag inside the main compartment to keep your items dry;
c. place heavy objects close to the back of the frame, centred and higher on the load. This will balance your pack;

d. carry long items vertically. The width of your load should not exceed 60cm;
e. the shape of the load should be kept as flat as possible;
f. snug up all compression straps to keep your load compact;
g. place all toiletries in a protective bag inside your pack to avoid toothpaste flavoured clothes;
h. carry all fuels in an approved sealed container;
i. pack all the things you will need in an emergency in pockets or in the top of your pack;
j. you want to pack things in the order you are likely to use them for example, pack your shelter and cooking kit at the top of your bag so that it is the first thing you pull out. If it is raining when you arrive at your biv site, you will not have to pull all your clothes and sleeping bag out looking for your shelter;
k. pack your days meals and snacks in an outside pocket – so you do not have to open the main bag at lunch or snack time;
l. get a hydration bag (a soft plastic water bottle with a long flexible drinking tube) or position water bottles in convenient pockets or pouches;
m. avoid carrying more than 16kg (35lbs) – heavier weights in any kind of pack may injure or damage the nerves in your shoulders. If you notice your hands becoming numb when carrying a pack, try loosening your shoulder straps, lightening your load or padding your shoulders. Experienced and stronger trekkers may find they are comfortable with heavier loads, but they should still be watchful for signs of injury;
n. Some external frame packs may require extra padding at the small of your back to hold the frame away from you. Try your pack on before your trek and ensure that you do not get any chaffing on your back or hips; and,
o. Always protect and pad sharp edges of equipment and tools.

EO 403.03: APPLY PRINCIPLES OF SAFE TOOLCRAFT

SAFETY

When using an axe, shovel or bow saw:

a. store tools in a secure place, never leave them lying around or touching the ground;
b. always use the right tool for job;

c. follow the safety procedures for using the equipment; and,
d. keep edges and blades sharp, handles tight, and clean and lightly oil steel parts before storage.

USING A SAW:

To use your saw safely use steady strokes without excessive weight on the blade. Be sure to firmly secure the wood, and be careful not to saw your fingers!

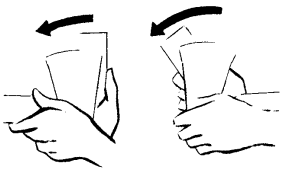
USING YOUR AXE:

To use your axe safely;

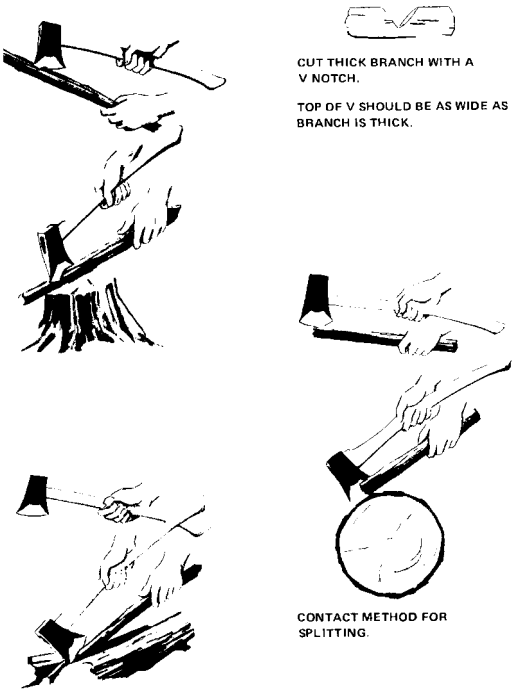
a. set yourself up a safe distance from other people;
b. check that the axe head is secure on the handle;
c. always limb (cut off branches) by working from the bottom of the tree towards the top, and stand on the opposite side of the trunk from the branches you are cutting off;
d. ensure that your swing is not aimed at your foot;
e. secure your target in a safe manner – not with your hand; and,
f. use both hands on the handle.



SHARPENING AGAINST LOG



CIRCULAR STROKES FOR HONING



EO 403.04: ASSEMBLE A SURVIVAL KIT

You should carry a compact survival kit when travelling or working in the wilderness. The tools, supplies and medical items in your kit may save your life in an emergency. Carry your kit in a pocket – it is possible that you will become separated from your pack (voluntarily or not) in an emergency.

When you are selecting a container for your kit ask yourself these questions:

a. will it float?
b. is it sturdy?
c. is it water proof?
d. is it compact, light weight and manageable?
e. can I get into it in a hurry with cold hands?
f. Is it a bright colour so I can find it?

YOUR PERSONAL SURVIVAL KIT

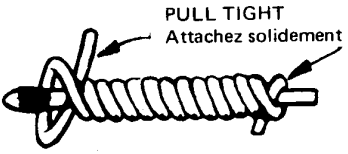
Each survival kit will reflect the needs of the user. Fill yours with items that you know you will use, and alter the contents to reflect the expected environment you will be travelling in.

This is a list of items that you can select from to fill your kit. Add to this list when you discover another useful item. There is no need to carry all of these items:

a. **matches** – at least 20, the kind that will strike anywhere and are waterproof – it is a good idea to store matches in a separate container inside you kit. Put the striker from the match box in the container with them. 35mm film canisters are good for this. Break matches in half to save space if required;
b. **candles** – tea light or small candles;
c. **snare wire** – #18 gauge brass wire – 5m;
d. strong thin cord – 10m;
e. **fishing gear** – 5m of 15 lbs line, bare hooks, a lead weight and a cork;
f. **medical kit** – iodine, adhesive bandages of various sizes, roll bandage, small medical scissors, adhesive tape and dressing, moleskin or second skin for blisters, water purification tabs;
g. small safety pins;
h. **plastic bags** – 2 large orange garbage bags for shelter and signaling, 2 small bags for water collection;
i. **food** – concentrated soup, tea, coffee, sugar, hard candy, or OXO cubes;
j. **aluminum foil** – 3 m (to bake or to make a temporary pot);
k. **fuel tablets or fire starters** – sealed in plastic to avoid contamination of the rest of your kit;
l. **alternate to matches for fire starting** – magnesium stick or flint and steel;
m. **mirror** – unbreakable and shatter proof (not glass), for signaling;
n. small simple compass;
o. emergency blanket;
p. spare flashlight bulb and batteries;
q. several sizes of needles and 2m strong thread;
r. flexible saw – wire type, oiled before storage;

s. **crayon (will write anywhere) and paper;**
t. **personal hygiene items** – dental floss, baking soda for teeth brushing, a small piece of soap; and,
u. **duct tape** (wrapped around crayon or outside of container).

Note: if you can carry only a bare minimum, carry matches, a signaling device (whistle), protection for your body from the elements (garbage bags), a container to heat water, quick energy food and adhesive bandages. In winter you can dip string in paraffin wax and wrap this around your matches. This will make the match burn longer and will help with starting fires.



STOP! IN A EMERGENCY SITUATION

STOP where you are! Don't panic. Many lost people waste valuable energy, and risk injury by panicking – running aimlessly, continuing to travel after dark, walking in circles, etc.
THINK about immediate and future dangers and the factors involved in your situation. Consider the time of day, your physical condition, and the last time you had a drink or something to eat. Try to list the options that are open to you.
OBSERVE your immediate environment, weather, terrain, resources available, and how each of these affect your options. Look for a location for a shelter, for fresh drinking water, and for clues to your location or the route you took to get where you are now (e.g. 'I followed a stream until it went into a swamp, then I walked over this hill behind me…)
PLAN your best course of action. Include in your plan the methods you will use to signal rescuers.

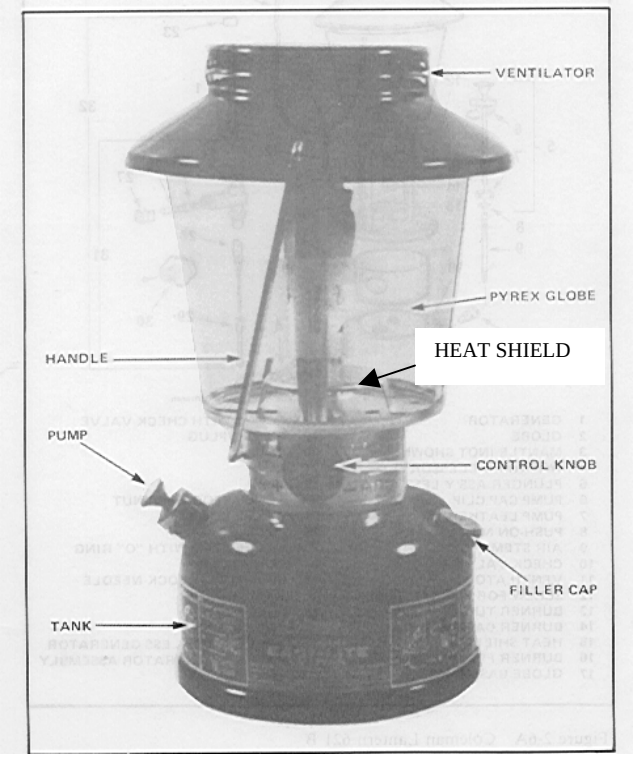
Remember! In a survival situation, stay in one place that is close to a supply of drinking water and is visible from the air.

EO 403.05: LIGHT A STOVE AND LANTERN

INTRODUCTION

Coleman lanterns and stoves are designed to burn Coleman's own brand of fuel (or naphtha) which is a very flammable liquid fuel. This fuel is pressurized in a tank attached to the unit, heated in a generator and then burned as a gas. Keep your stove and lantern clean and in good working condition. Hot food and light in the dark are two key elements of an enjoyable outdoor experience.

PARTS OF A COLEMAN LANTERN



SAFETY

Remember these safety procedures for the lantern:

a. fill, light, and use the lantern outside of tents, buildings and confined shelters;
b. ensure nothing flammable is placed on top of the lantern;
c. only fill or pack up a lantern that is cool to your touch;
d. be careful to avoid splashing fuel on your skin, or in your eyes;
e. always fill the lantern in a different place than where you plan to use it – stay downhill and downwind from stoves or lanterns that are being used or other sources of fire;
f. set the lantern on a stable, level and clean surface when you use and fill it. If you hang the lantern for use, ensure that it is secure and a safe distance away from flammable objects;
g. always fill using a funnel, wiping up any spilled fuel; and,
h. ensure that the heat shield is in place.

TO USE THE LANTERN

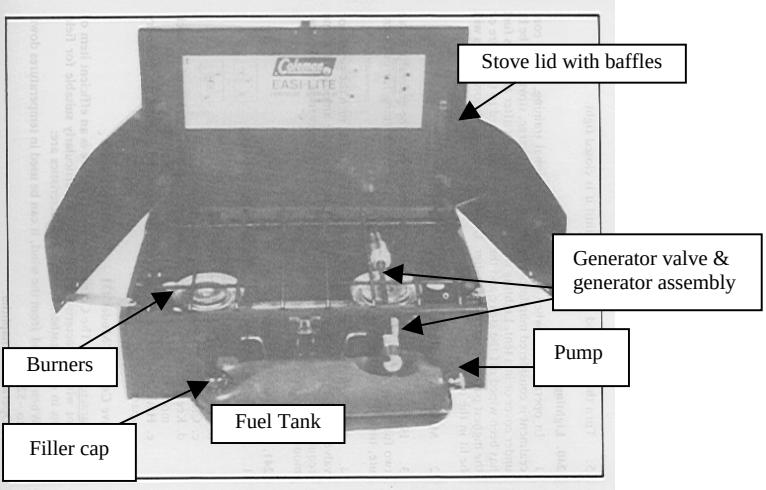
After filling your lantern, clean and finger-tighten the filler cap. To pressurize the fuel tank: turn the pump handle counter-clockwise three turns, pump 10 to 15 strokes and then turn the pump handle clockwise until tight. When pumping, place your thumb over the hole in the pump handle when pushing in, and release it when pulling out.

To light your lantern, light a match, insert the match through the access hole at the bottom of the globe, and then turn the control knob clockwise just enough to allow some fuel into the mantle. Some lanterns may have a “gas tip cleaning lever” which will have to be engaged to light. Do not touch the mantle with the match. When the lantern is burning with an even white light, turn the control knob to fully open, and return the gas tip cleaning lever.

You will need to re-pressurize the fuel tank on a regular basis during the 6 to 8 hours that the fuel will last. Never open a pressurized fuel tank when the lantern is lit.

To turn off, simply stop the gas flow by turning the control knob. Always refill your lantern immediately after use (when cool) if you plan to use it again soon.

PARTS OF A COLEMAN STOVE



SAFETY

Remember these safety procedures for the stove:

a. fill, light, and use the stove outside of tents, buildings and confined shelters;
b. ensure no pots or objects are placed on the stove when filling or lighting;
c. only fill or pack up a stove that is cool to your touch;
d. always fill the fuel tank in a different place than where you plan to use the stove – stay downhill and downwind from stoves or lanterns that are being used or other sources of fire;
e. set the stove on a stable, level and clean surface when you use and fill it; and,
f. always fill using a funnel, wiping up any spilled fuel immediately.

TO USE THE STOVE

After filling your stove, ensure that you clean and finger-tighten the filler cap. To pressurize the fuel tank: turn the pump handle counter-clockwise three turns, pump 30 to 40 strokes and then turn the pump handle clockwise until tight. When pumping, place your thumb over

the hole in the pump handle when pushing in, and release it when pulling out.

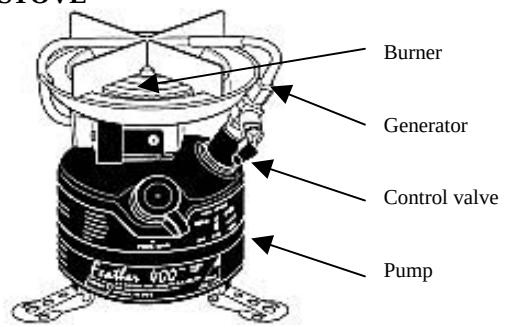
Ensure that the lid is properly supported by the adjustable braces at the bottom edge of each baffle.

To light your stove, lift the grate and turn the “lighting lever” up. Light a match, turn the generator valve to the “light” position and, holding the match horizontally, place the match close to the right hand burner. When the stove is burning with an even blue flame (about 1 minute), turn the generator valve to the desired setting and return the lighting lever to the down position. If required, light the second burner by lighting a match, pulling the control valve out and opening it 2 to 3 turns, and place the match close to the burner.

You will need to re-pressurize the fuel tank on a regular basis during use. As the level of fuel decreases, the number of strokes required to re-pressurize will increase. Never open a pressurized fuel tank when the stove is lit.

To turn off, simply stop the gas flow by turning the generator valve. Always turn off the left hand burner first. Refill your stove immediately after use (when cool) if you plan to use again soon.

SINGLE BURNER STOVE



The single burner stove follows the same lighting procedures as listed above. The single burner stove is lightweight, convenient to pack and carry, and is good for one to five people on an expedition.

EO 403.06: DISCUSS THE PRINCIPLES OF OUTDOOR COOKING WITH WATER PROCURED IN THE FIELD

FINDING DRINKING WATER

We have to be careful of the water we drink – even water in remote wilderness areas can be unsafe. Drinking water can contain hazards that are either natural or a result of pollution by human activity.

Water is essential to survival. If there is no safe drinking water available to you, you will have to find your own.

To find safe drinking water, collect rainwater or clean ground water (from a spring or a fast moving stream) in order to avoid large hazards like silt and debris. For other sources of ground water like lakes, ponds and swamps, you may need to filter out visible hazards with a cloth or screen. Brown or green water can be somewhat cleaned by adding a small amount of white ash from a fire to the water, stirring or gently shaking for 5 minutes, allowing it to settle, then filtering through a cloth. This step doesn't purify the water, but will make it easier and cleaner for the purifying process. No matter how clean water looks, there could be microscopic hazards as well. These smallest hazards are called "pathogens" (disease-causing micro-organisms) and include:

a. protozoa: these include "Giardia" and "Cryptosporidium." Both of these are caused by fecal-oral transmission, which means that if you drink water (lake, stream, pond) that an animal has used as a washroom, you are at risk of getting sick. It effects the intestine and digestive tract causing cramps, diarrhea and nausea. These effects can last up to 21 days;
b. bacteria – these cause diarrhea and dysentery; and,
c. viruses – these can cause illnesses like hepatitis and polio.

No matter where you have collected your water in the wilderness, **bring water to a rolling boil, then cool, before drinking.**

An alternative to boiling is a water filter and purifier system. These mechanical and chemical devices filter and clean drinking water. Each water filter/purifier is designed to eliminate up to a certain size of hazard (stated by the manufacturer) – some systems require the use of iodine or other chemicals to make water completely safe. All filters

have limits in the amount of water that can be processed during a period of time, and in the lifetime of the parts.

OUTDOOR COOKING

Eating regularly in the field is a very important factor in maintaining your strength and energy. Even though you may be preoccupied with other things going on, you must eat as much healthy food as possible when engaged in physical outdoor activities. Cold weather, strenuous exercise and constant activity use up a lot of your energy reserves, and only a good, healthy meal can replace them.

As an Army Cadet, you will be introduced to at least one form of military field ration – most likely an Individual Meal Pack (or "IMP"). Each IMP is divided between cooked meat, vegetables and fruit in sealed foil pouches, and dried foods in paper pouches. The foil pouches can be heated in boiling water until hot, and some of dried food may need water added. All of the food items are safe to eat cold and dry – they might not taste as good, though. You will also find high sugar items like chocolate, hard candies and drink mixes, as well as coffee and tea. Each IMP contains a fair amount of paper, cardboard and foil garbage. One way of reducing the amount of excess garbage that you'll have to carry is to "break down" the rations before packing. This entails selecting only the food items that you intend to use and leaving behind the extra packaging. Remember that you will likely be hungrier when you're on your trek than you are when you're packing – always bring a little extra food.

For snacks on the trail you can supplement your IMPs with high calorie trail mixtures of nuts, seeds, granola, dried fruit, cereals, candies, etc.

You may also have the opportunity to learn about other ways to cook fresh food in the field:

a. boiling is one of the simplest and surest ways of cooking fresh food. Almost every food source can be made safe to eat by boiling. Save the water left over from cooking plants and animals to make a soup;
b. food can be baked over a fire, or wrapped in aluminum foil (or wet leaves and mud) and covered in hot coals;

c. fresh meat and fish can be smoked to cure it, or leave it to dry in bright sun on a rack; and,
d. food can be fried in a pan on a stove, or on a rock by a fire.

EO 403.07: CONSTRUCT A SHELTER

INTRODUCTION

When you construct your shelter in the wilderness you need to consider several factors. Not only do you need protection from wind, precipitation and direct sunlight, you must also consider the effect your activities have on the environment around you.

SELECTING A WILDERNESS SHELTER SITE

To protect yourself and your shelter:

a. avoid overhanging tree branches and other overhead hazards;
b. avoid open hilltops – you will be exposed to wind and lightning;
c. avoid depressions where water might pool after rainfall;
d. ensure you are at least 100 m from your cooking area (bears and other animals will be attracted to food smells);
e. orient the opening of your shelter away from the wind; and,
f. never site your shelter on a road or path.

To lessen the impact on the environment and other wilderness users:

a. ensure you are at least 100m from open water – local wildlife relies on water access for survival and your presence at the water's edge may interrupt their habits;
b. select a shelter site out of the direct view of other wilderness users – at least 10m from a trail, path or road; and,
c. construct your shelter on a durable surface like sand, rock or grass – fragile plant life may be permanently damaged by your use of the area. Avoid moving large stones and branches.

TENTS AND PRE-MADE SHELTERS

Tents and pre-made shelters come in many styles, sizes, shapes and materials. Most will use poles (aluminum, carbon fibre or fibreglass) and "guy" lines for support, and will be constructed from a lightweight water-resistant material. Tents and shelters are traditionally made from

nylon, polyester, canvas or cotton. Some require pegs driven into the ground for support. No tent or shelter is fire proof, so use extreme caution with open flame.

Modern tent styles include dome, tunnel and ridge (or a-frame) designs. Each tent is rated by the manufacturer for 3-season (spring, summer and fall), or 4-season use. A 4-season tent has stronger materials and is designed to withstand strong winds and use in cold environments.

For backpacking expeditions, choose a tent or shelter that offers sufficient protection for you and your kit. Sometimes you can divide the parts of the tent to carry among the other members of your “tent group” – the group of people sleeping in one tent. Each tent will be rated for the number of people that are supposed to fit in the tent to sleep. Often, you will need to choose a tent rated for at least one more person than you plan to have in your tent group to allow for room for your kit. Some tents have a small sheltered area at the door, called a vestibule, to allow a storage area for kit.

Some tents use a separate “fly” (a waterproof tarp that fits over the tent) to keep you dry, while some have just a single wall and roof with waterproof qualities.

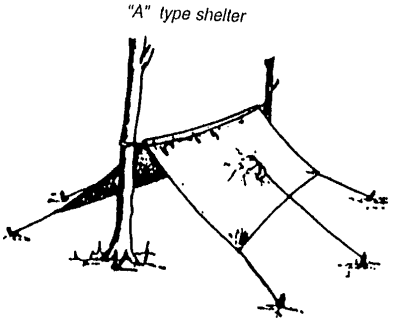
All tents must be dried completely before long-term storage.

IMPROVISED SHELTER

Pre-made shelters, lightweight tarps, bivi-bags, and military ponchos and half-shelters can be used as light weight alternatives to a tent. The easiest improvised shelter is the “A-frame” shelter. Check for sufficient height by sitting up inside – it should not touch your head. Keep the sides low to protect you from wind, and to trap body heat. . To construct an "A" type shelter:

a. select two trees that are approximately seven feet apart;
b. zip the two ground sheets together, or use a tarp 3m x 3m;
c. attach a string to the centre grommet and tie to a tree at waist level (high enough to sit upright inside) with the rubberized side of the groundsheet down. Be sure to protect the tree by wrapping twice or more, or by padding the string where it goes around the tree. Repeat this at the other end. The fabric should be tight;

d. pull the edges of the groundsheet out and place pegs through each of the corner grommets. Sturdy twigs that are approximately five inches long will serve well as pegs. Starting with the corners, then pegging the centre is easier. There should be approximately three inches gap between the ground and the ground sheet, this will allow for air to circulate through and reduce the condensation; and,
e. attach a sting to the grommets on the top sides of the ground sheet and pull the sides out (shown below). This will give you more room inside and prevent rain from pooling.



Note: Elastic cords can be used instead of string, and small metal tent pegs will speed up the setup.

EO 403.08: FOLLOW CAMP ROUTINE AND DISCIPLINE IN THE FIELD

HYGIENE

A high standard of personal hygiene is important in the field because it protects you against illness and promotes good health. Keep yourself, your clothing and your equipment clean and dry. Change your clothes, especially socks and undergarments, regularly. Avoid non-biodegradable soap, and soaps or shampoos with perfumes or strong odours – animals and insects will find you more irresistible than you would probably prefer. Good personal hygiene not only makes you feel better, your teammates will appreciate it too!

Be sure to **read EO 403.10** along with these healthy hints:

a. wash yourself daily – completely when possible with clean water or snow. Wash your hands carefully with water and biodegradable soap after dirty work or using the washroom, and before cooking or eating. When water or privacy is restricted wash at least the areas of your body that sweat the most – face, neck, feet, armpits and crotch;
b. keep your hair neat and wash with soap or shampoo at least once a week;
c. brush your teeth and use floss at least twice a day;
d. use body powder on your feet and crotch to help avoid chaffing in warm weather. Petroleum jelly will also help protect from chaffing, especially in sensitive areas.
e. it is very important to go to the washroom regularly. Daily bowel movements will keep your system working properly. A change in activity and diet will often put extra stress on your digestive system, so maintain a healthy diet and drink plenty of fluids. Never try to "hold it" when you have to go, especially at night – you will lose more sleep and be more uncomfortable holding it than if you just get up and go!
f. eat all your food despite whether you think it tastes good or not. Your body requires food for energy;
g. always treat injuries properly and immediately. Keep dressings and bandages clean and dry. Make sure you inform someone in command of any serious injury. Wounds that will not heal or that get bright red could be infected – get medical help immediately; and,
h. keep alert, cheerful and work hard.

SAFETY REGULATIONS, ROUTINE AND DISCIPLINE:

In a bivouac site, there are general rules that apply to you at all times. These rules do not change and some may not be written or told to you at every occasion. They are procedures that you are expected to remember and follow whenever you are camping with cadets. These are called "Standard Operating Procedures" or SOPs.

Each corps will develop their own SOPs for Bushcraft training. Here are some common SOPs for cadets:

a. you will not go into water above your knees without supervision and an approved personal floatation device;
b. you will use tools safely, and only after receiving instruction;

c. you will know the location of the group first aid kit, the fire fighting equipment and the location of your leader's shelter;
d. you will keep your shelter and the surrounding area tidy and free from hazards – keep your equipment orderly and protected when not in use;
e. male and female cadets will not enter the other's shelter;
f. you will know the action to take in case of a fire, or other emergency;
g. you will inform your leader before leaving the bivouac site;
h. human, food, and water waste will be disposed of properly at all times;
i. you will not venture further than the latrine by yourself; and,
j. you will protect yourself, you teammates and your equipment from natural hazards – including fire, animals, insects, heat and cold injuries, lightning and dehydration.

EO 403.09: DISCUSS NATURAL HAZARDS

The Canadian wilderness is a great classroom for learning. There are some lessons however, that you may not want to learn the hard way. Poisonous plants, biting and stinging insects, nuisance animals, lightning, heat and cold injuries, and hazardous terrain can make an otherwise enjoyable experience a nightmare.

POISONOUS PLANTS

Poison ivy is the most common poisonous plant in Canada. It grows in many locations and in many varieties. It is common to find it in wooded areas, hillsides and sandy terrain. All varieties share the common feature of three shiny leaves that taper to a point at the end and emerge from one common stem. The plant, which can climb or grow free-standing up to 45cm, may grow a cluster of green berries that turn white during the growing season. Contact between the sap of the plant and your skin can cause irritation, redness, swelling and eventually blisters on your skin that can spread if you scratch. About 85% of people will react to poison ivy, and your level of sensitivity may increase over time – meaning that just because you don't react now, you may not be immune later. The sap can be carried on clothing or animals and can be found in the plant at any time of year – even the winter. The effects of poison ivy will last 14 to 20 days or longer if you spread it by scratching, or by not taking care of it.

Your simplest defence is to wear long pants when in areas where poison ivy grows, wash clothing and boots after suspected contact and take a good look for it before setting up your shelter for the night. If you come into contact with it, clean the affected area with rubbing alcohol if you have it, or let the area dry and then wash gently with soap and water. Do not break blisters if they form. Some people may have severe allergic reactions to poison ivy, watch for swelling and breathing problems.



Poison oak (a close relative of poison ivy, but with leaves more like an oak tree's) and poison sumac (like regular sumac, except with white berry clusters and smooth edged leaves) are two other poisonous plants found in Canada. Treat them the same as poison ivy.

INSECTS

Biting and stinging insects are found everywhere in our wilderness. They are the most common hazard for the nature enthusiast. For most people, insects are a nuisance that can be defended against by protective clothing and repellant. About 15% of people will react seriously to bee and wasp stings and insect bites. For them, an insect can produce a condition known as ""anaphylactic shock" – where tissues swell extensively and can constrict their airway. Reactions can start with headaches, fever and muscle spasms, and can develop into widespread hives, nausea, dizziness, and difficulty breathing. Some

will require immediate assistance in the form of antihistamines, epinephrine and immediate professional medial aid. Usually those people allergic to stings will carry a kit with them with appropriate medication in it. If you are allergic, or one of your teammates is, make sure you know how to use the medication in the case of an emergency.

Mosquitoes, black flies, horse flies and deer flies may also cause reactions in people. Although not as severe as bee and wasp stings, swelling and fever may result from multiple bites. Wear protective clothing, avoiding dark colours (insects are attracted to them), and use a repellant if necessary.

Ticks can also cause irritation and in some cases carry harmful germs. Wear long pants, tucked into socks or closed at the ankle when walking in the woods, and check your legs each day for ticks embedded in your skin – they're about the size of a pinhead. If you find one, pull it out immediately with tweezers – don't use your fingers. You can use a sterile needle to remove any remaining parts. A tick bite may show up early on as a red bump at the site, followed 3 to 30 days later by a red rash with a white centre – a "bulls eye." Save the tick part(s) that you remove in a plastic container and bring it to a physician if you suspect disease. Wash the bite with soap and water.

NUISANCE ANIMALS

You have the potential to meet a lot of animals during your travels in the wilderness. Some of these animals will be scared of humans and you may only catch glimpses of them, or just see their tracks and scat (droppings). Some animals however, you will wish you had never met.

Raccoons, skunks, mice, squirrels and chipmunks are common woodland animals that are not shy of human activity. Keep all food containers sealed, avoid spilling food on your clothing, and wash dishes and cutlery away from shelters. Don't feed wild animals, and dissuade animals that hang around your bivouac site. Never eat in your shelter. Hang food containers from an overhanging branch well away from your shelter to keep persistent animals out. Stay out of old buildings and structures.

Bites from animals are rarely harmful, but wolves, coyotes, fox, dogs, bats, skunks and raccoons are known to carry rabies. Squirrels, rabbits,

mice and rats may become rabid but rarely transmit the disease – however they may carry other infections.

HEAT AND COLD INJURIES

"Hypothermia" is the rapid lowering of your body's core temperature. "Hyperthermia" is the raising of your body's core temperature and comes in two general stages: heat exhaustion and then heat stroke. Both these conditions develop over periods of continued exposure to the elements, and can be exacerbated by poor planning and poor supervision.

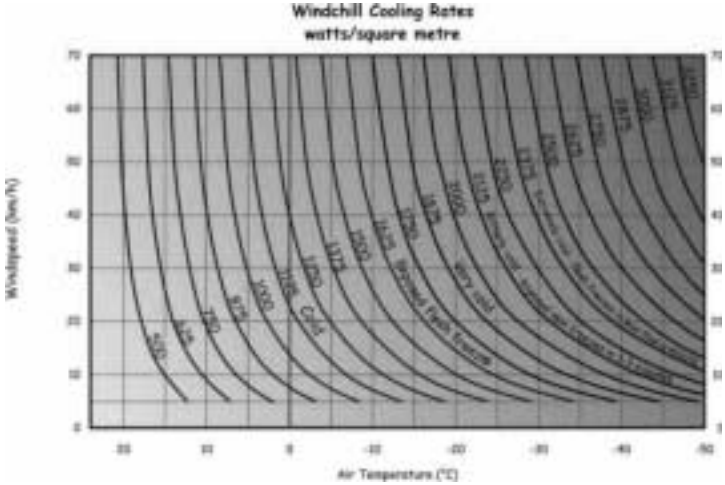
COLD

Hypothermia, or "exposure," is the most severe form of cold-related injury. It is defined as a body temperature of less than 35° Celsius or 95° Fahrenheit. Hypothermia is a major danger because the symptoms come on so gradually that many victims and their teammates don't notice them until it's too late. Hypothermia is usually first noticed when a person is shivering and can't stop. At this point the condition is not serious and can be treated by getting the person warm, dry and sheltered. Warm food and drink will also help. Severe hypothermia starts when the person stops shivering – their body is giving up trying to stay warm. They will become drowsy and eventually lapse into unconsciousness and die without treatment. You can become hypothermic in almost any weather, in any season – but especially in cold, wet and windy environments. Protect yourself from wind and precipitation, keep warm and dry, make sure you are fit, well-fed and well-rested before working in the cold. Every person who displays signs of hypothermia must receive appropriate first aid immediately – that means stop at the closest safe location and treat the person! Mild hypothermia can degrade into serious in a short amount of time. Victims of serious hypothermia must receive medical attention.

In cold weather you must also beware of frostbite. Frostbite happens when soft tissue freezes. It is a particular danger on days with a high wind-chill factor. If not properly treated, frostbite can lead to the loss of tissues or even limbs. Exposed and remote skin (face, ears, fingers and toes) is often the first to freeze. Prevent frostbite by wearing appropriate clothing, mitts, hat/toque, socks and footwear. Keep active in a cold environment and stay dry. Treat frostbite by slowly warming the affected area. Do not allow this area to freeze again or the flesh

cells will die. In cold weather partner cadets (and yourself!) together to watch each other for signs of cold related injuries.

Wind Chill is the term used to describe the rate of heat loss on the human body resulting from the combined effect of low temperature and wind. As winds increase, heat is carried away from the body at a faster rate, driving down both the skin temperature and eventually the internal body temperature.



Interpreting the chart – working like a grid reference, find the current temperature and wind speed, then follow each to where they intersect on the chart. That gives you the watts per square metre reading. Compare that to the list below.

Under 900 – Comfortable with normal winter clothing
900 to 1400 – Work and recreation becomes uncomfortable unless properly clothed. Hats, coats and gloves are recommended.
1400 to 1600 – Outdoor work and travel are safe with quality winter clothing.
1600 to 1800 – Frostbite can occur with prolonged exposure. Heavy outer clothing is essential. Your weather office will add the current wind chill to public forecasts at this level.
1800 to 2000 – Frostbite can occur in a few minutes. Multiple layers of clothing become essential. (May feel like minus 30° C).
2000 or more – Unprotected skin can freeze in one minute. Adequate face protection becomes important. Cadets require continuous

supervision while outdoors. Work and travel alone is not advisable. (May feel like minus 40° C).
2200 or more – Adequate face protection becomes mandatory. Work and travel alone is hazardous. Special warm-up breaks are recommended for anyone working outside.
2300 or more – Outdoor conditions become dangerous. Postponement of training should be considered. (May feel like minus 50° C).
2400 or more – Outdoor conditions are dangerous even for short periods of time. All non- emergency outdoor work should cease. Buddy system and observation are mandatory. (May feel like minus 60° C).
2600 or more – These are rare wind chill values which will be experienced in some major blizzards. Danger is extreme.

HEAT

Heat exhaustion and heat stroke can be avoided by drinking plenty of water before and during activity in warm weather (up to 1 litre per hour), wearing a hat and sunscreen, and by moderating activity in extremely hot environments. A person suffering from heat exhaustion may be pale, dizzy, or nauseous, and have cold and clammy skin. They may also have a headache or cramps. In fact, a headache is often the first sign that you are dehydrated! Heat exhaustion can be treated by giving the victim cool water to drink and allowing them to rest in the shade. If there is little or no improvement after 30 minutes, seek medical attention. Untreated, heat exhaustion symptoms will progressively get worse, leading to heat stroke and eventually death.

Heat stroke is just the next step from untreated heat exhaustion. Symptoms are all of the above getting worse, leading to disorientation and irrational or even violent behaviour. If conscious, the victim will complain of chills and nausea and their skin will become hot and dry as their body looses its ability to sweat. Heat stroke requires immediate medical attention! Be prepared to carry out lifesaving first aid.

Sunburn is the result of the suns UV A and UV B ray’s on your skin over a period of time. It can start with a minor burn which shows red on your skin, followed by more serious burns that could include

second degree (blisters) or third degree burns. Exposure to the sun is a known cause of skin cancer. The amount of time it takes to burn your skin depends on several factors:

a. your genetics;
b. the protection that you put on – sunscreen (SPF 15 or more!) or protective clothing;
c. amount of time you spend in direct sunshine (note that the sun's rays can still burn you through light cloud/fog/smog/mist, as well as shallow water);
d. time of year – there is more risk during summer, but you can still get sunburn on the coldest day of winter!
e. pollution, and other meteorological factors; and,
f. your state of health, medication you might be taking, and other physiological factors.

UV Index – indicates the intensity of the sun's UV rays on a given day. There are four categories -- low, moderate, high and extreme. A low UV Index means it will take more than an hour to burn your skin; an extreme level means it will take less than 15 minutes. The index is often included with weather reports.

Protect yourself by:

a. covering up – wear light clothing, long sleeve shirts and full length pants (or long shorts at least). Always **wear a hat**, preferably with a wide brim;
b. applying sunscreen to exposed skin every 2 hours, or more often if you are near water or perspiring heavily. Put sunscreen on your skin at least 20 minutes before you go out in the sun. Get your cadets used to wearing sunscreen, paying particular attention to the most exposed parts – ears, face, neck, shoulders and back, knees and tops of feet. Do not forget your lips, ears and nose. These parts of your body burn easily; and,
c. reducing or avoiding extended exposure during the peak sun hours, 1000-1600hrs.

A sunburn gets worse, even after you move out of the sun. It's a delayed reaction, with most of the pain occurring 12-24 hours after exposure. Because their skin is thinner and more sensitive than an adult's, children and teenagers need extra protection from ultraviolet radiation. A tan indicates that your skin has already been damaged. Remember, sunburn is not caused by heat. Infrared gives us heat... UV rays give us skin damage.

People with dark skin can get sunburns and skin cancer. Dark skin gives an SFP protection of only about 8.

Penetration of ultraviolet (UV) light increases about 4% per 300m gain in altitude.

Your eyes can be damaged as well by the sun's rays. This is especially common on the water, and even more on the snow, where the rays are reflected back from the surface. Select a pair of sunglasses rated for full UV A and UV B protection. On snow, further protect corners of your eyes by placing shields on the temples of the glasses.

DEHYDRATION

Water is more essential to your survival than food. For ordinary activity, it is recommended that you drink at least 1 litre of water each day. For strenuous activity, or activity in a warm environment you may need to consume as much as 1 litre per hour. Do not forget that you will need to drink water regularly, even in the winter, if you are working hard. Cool water, with no additives, is the best possible drink to replenish your body.

Take advantage of all rest stops to drink. Drink slowly, take small sips and hold the water in your mouth for a short time before swallowing. Refill your water bottle(s) at any opportunity. Avoid all caffeinated drinks, as they will dehydrate you. The two main ways of telling if you are dehydrating are;

a. you have a headache; and,
b. your urine is dark yellow, or you've gone 24hrs without urinating.

LIGHTNING AND DANGEROUS TERRAIN

Lightning strikes kill people every year. When you notice a thunderstorm approaching, stop whatever you are doing and take steps to ensure your safety. Get out of the water, do not stay on a hill top or in an open field, stay out from under tall single trees, and stay away from towers and poles. If the storm has caught you off-guard, crouch down as low as you can with your feet close together – this will reduce the surface area of your body exposed to possible ground current from a nearby strike. Place yourself in a cluster of trees, spread out 10m

from other members of your team. Avoid depressions where water may gather as it will conduct ground current. If your sleeping pad is dry, place it under your feet for insulation.

You should take extra care when crossing dangerous terrain. Steep slopes and cliffs, wet rocks, obstacles on a trail, and deep flowing water all create risks to your safety when you try to cross them, or pass near them. For difficult obstacles, pass your rucksack over to a teammate first, then cross. Or use a “spotter” at the obstacle to assist teammates. Do not try to wade through water when you can not see the bottom. Only attempt to cross water obstacles deeper than knee-deep with supervision and the required safety equipment.

If you are required to travel at night, ensure that you can see and be seen. Stay off roads where visibility is limited, and do not try to pass through dense bush where you can lose your way, become separated from your group or walk off a cliff. Reflective, or bright clothing, glowsticks or flashlights are recommended for each team member.

EO 403.10: DEMONSTRATE A CONCERN FOR THE ENVIRONMENT

MINIMUM IMPACT CAMPING

The goal of minimum impact camping is to leave behind no trace that you have used or passed through a wilderness area. By acting responsibly and taking a few precautions, you can leave a bivouac or a trail in the same natural condition for the next person to enjoy. You will also help the wildlife and plants to recover faster from your visit.

There are three types of locations that you may discover in the wilderness. “Pristine” areas (places that show no signs of human activity), popular areas, and places that show only some human use. Popular camping areas and trails have obvious and well-worn paths and bivouac sites. The vegetation is often damaged permanently and the earth may be worn smooth.

When travelling in the wilderness you will have to choose between staying on established trails and using established bivouac sites, or going out into pristine areas. Avoid areas and trails that show only a little use as they have not been permanently damaged and could grow

back to their natural condition if left alone. By using popular areas and trails you actually limit the extension of damage to the wilderness. Many trails have been created to allow people to use the wilderness without harming it – they have established toilets, water points and bivouac sites that take the environment into consideration for you.

Remember that you are not the only one using the wilderness – you are a guest in someone else's home. Always clean up after yourself. Any garbage that you bring in, you must bring out. When possible, clean up other garbage that you find along your way or at your biv. Keep noise, and lights at night, to a minimum, and try not to disturb the natural setting by unnecessarily moving or damaging trees, plants or rocks.

If you are lucky enough to find artifacts or traces of previous inhabitants, be careful not to disturb or move them. Respect burial sites, private property, local residences and the privacy of other wilderness users.

TRAIL ETIQUETTE

Wear shoes and boots with shallow treads so you don't rip up the ground – in the wilderness, the most widespread type of damage caused by recreational use is caused by people trampling the flora. When following an established trail, avoid taking short cuts or walking around wet or muddy sections. These deviations from the trail widen it or unnecessarily damage the land around it. When walking in pristine areas, spread out and take a slightly different route than the person in front of you – you can still follow your leader, but you will not make a permanent trail.

Travel in small groups (4-12 people) whenever possible, and be respectful to others you might meet along the way. Check your clothes regularly and remove hitchhiking noxious weed seedlings and burrs. When you leave a bivouac site it should look exactly as when you arrived – if not better.

COOKING

Read EO 403:12 for safe and appropriate methods of starting and using fires.

Avoid dropping or draining food on the ground in your cooking area. Waste water from cooking, when cooled, should be evenly distributed across the ground away from the cooking area and bivouac site. Do not dump waste water into ground water.

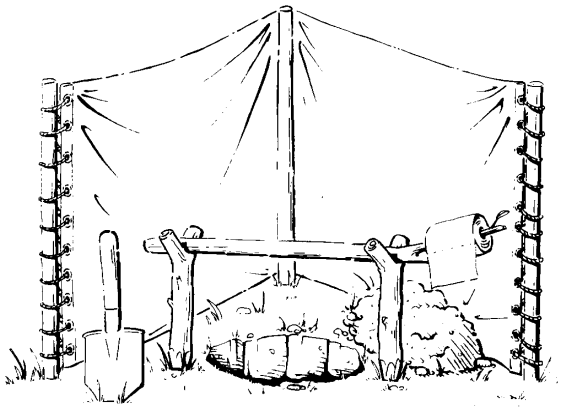
Eat all of your meal and pack up any garbage immediately. Pack wet waste in a sealed container or plastic bag. Remember to divide garbage up for recycling –cardboard, paper, metal, plastic, glass, etc.

HUMAN WASTE

Wherever possible you should use an established toilet, outhouse or portable toilet. Your choice for an alternative will depend on your location, the size of the group you are in and the time of year.
At your bivouac site, the proper disposal of human waste is important to your health and hygiene, as well as your enjoyment of the outdoors.

In small groups, you should use a “cat-hole” or “one-sit hole.” Each person selects a private and dry place and digs a small hole only 15 to 20cm deep. Make your deposit and then mix in the dirt from the hole with a stick, covering everything well.

In a group of more than 12 people, you should dig a latrine for communal use. A hole about 60cm x 60cm, 30 to 60cm deep will work for about 20 people for one or two days. Cut the covering vegetation in one piece and preserve it for covering the hole later. Leave the pile of loose earth and the shovel beside the hole to allow users to spread some dirt over their deposit. When the hole is full to about 15cm from the top, cover it with the remaining dirt and original natural cover.



The primary considerations for an appropriate location for a latrine or cat-hole are privacy and the prevention of fecal matter entering ground water. Choose a site at least 100m from a ground water source, on dry ground, in a location away from your bivouac and cooking area, and off trails and roads. Urine is not especially harmful to the environment so if you are on the trail and you have to go, and no facilities are available, you should find a private, dry and sunny place to relieve yourself.

In the winter it is often too difficult to dig into the ground, or to ensure that your waste will not pollute ground water. If no established facilities exist, wait for the waste to freeze, then pack it out in a doubled plastic bag.

WASHING

Soap, body oils, sunscreen, grease and fuel residue can all contribute to ground water pollution if you are not careful. Wash these off before swimming, and don't use soap when bathing. To bathe with soap, carry a pot or basin of water at least 100m away from a ground water source, and sponge bathe. Use as little soap as possible, and ensure the site you select is on high and dry ground. In the winter you can wash using clean snow following the same guidelines.

EO 403.11: TIE A KNOT

TYPES OF ROPES

Ropes are made with natural and synthetic fibres. Natural plant fibre from sisal, hemp, manila or cotton can be processed and made into rope. Hemp and manila are the most common natural fibre ropes. They are often used in larger sizes for rope bridging because they don't stretch very much and are easy to grip when wet.

Synthetic ropes are usually made from nylon, polyester, polypropylene or dacron. These synthetic ropes are generally stronger and lighter than natural ropes. Nylon is the strongest, but it also stretches significantly and sinks in water. Polypropylene ropes float, but are not as strong as nylon or polyester.

They can be manufactured using "laid," "woven," "kernmantle" or "sash" methods. Laid ropes are usually made of three main strands twisted around each other, each strand consisting of many individual fibres which are also twisted around each other. Laid and woven ropes are made for use in many situations while sash ropes are often decorative or made for light-duty purposes. Kernmantle ropes are used primarily for climbing, abseiling and rescue. They are synthetic ropes, with a protective outer sheath, that are tested for strength using standards set by the Union International des Associations d'Alpinisme.

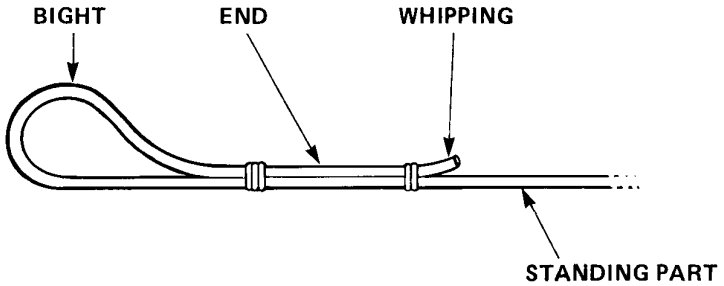
CARE OF ROPES

Ropes, like other pieces of equipment, require care and maintenance to ensure they work when you need them to. Some rules of rope care to remember are:

a. do not step on a rope;
b. distribute wear on the rope;
c. keep it dry and clean – wash with mild soap when dirty;
d. store coiled, in a dry place with all knots and kinks removed;
e. do not store near strong chemicals (acids , cleaning solutions) as the fumes may damage the rope fibers;
f. rope ends should be whipped, melted or bound to keep rope from unraveling;
g. avoid snagging on, or dragging across, sharp rocks; and,
h. always inspect a rope before and after use for damage.

TERMS

The following terms are used when describing the formation of the various bends and hitches.



Bight – is the middle part of a length of rope. This term also refers to a loop of rope, and to make a bight is to form a loop. Note that the rope does not cross over itself in a bight.

End – (or 'running end') is the short length at either end of a rope, which may be formed into an eye, or used for making a bend or a hitch. The end of a rope is also that length of rope left over after making such an eye, bend or hitch. This is commonly the part of the rope that you manipulate to make the knot, bend, lashing etc.

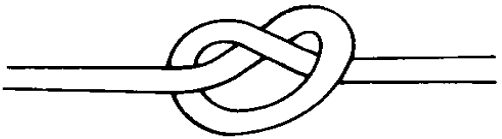
Standing Part – t his part of the rope usually 'stands still' during the knot tying process. Often it is the longer end that leads away from the loop bight or knot.

KNOTS

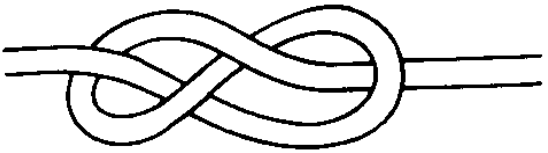
Knots, bends and lashings are all used to employ rope as a tool for binding, building or securing. A good knot will maintain much of the strength of a rope, be easy to untie even after loaded, and won't slip or come undone accidentally. Knots are always a temporary connection, and should not be left in ropes after use. Each knot has a specific purpose and is suitable for use with specific sizes of rope. You need to know how to tie each knot properly, and when and where to use which knot.

The Thumb Knot. Another common name for this is the overhand knot. It is used to keep the end of a rope from unravelling, or to stop a rope from passing through an eye such as when attaching pegs the guy of

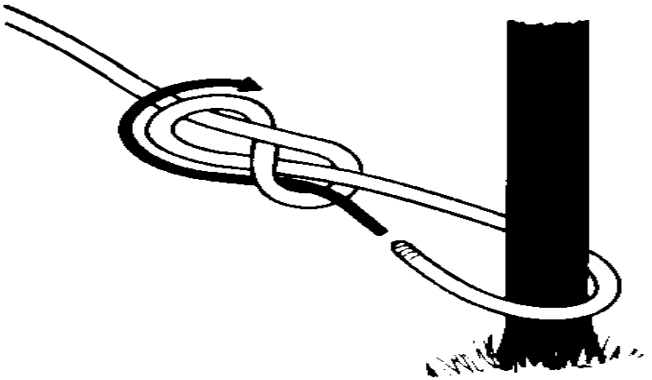
your tent. To tie this knot form a loop, making sure the running end of the rope crosses the standing part. Then pass the end around the standing part. It's also the first half of tying your shoes.



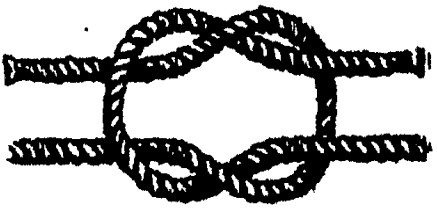
The Figure Eight Knot. This knot has the same uses as the thumb knot, but is easier to undo. To tie this knot, with the rope **away** from you, take the standing part in the left hand, palm upward and the running part making a loop, then carry on with the running end round behind the standing part, over the top, then down through the loop which you have formed .



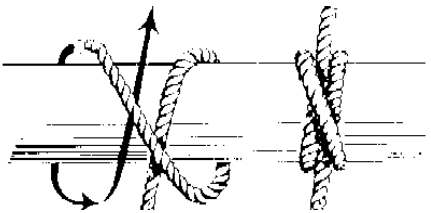
The Double Figure of Eight Knot – is used to anchor a rope around a tree trunk, pole or such item. Start this knot by tying a figure of eight knot several feet in from the end of the rope. Pass the end around whatever anchor you have chosen. With the end of the rope, trace the path of the rope that the figure of eight knot takes. Be sure to keep the running end alongside the standing end as you pass it through the original knot – stay on one side as shown below (on the outside of the standing rope). This knot will not slip and is easy to undo.



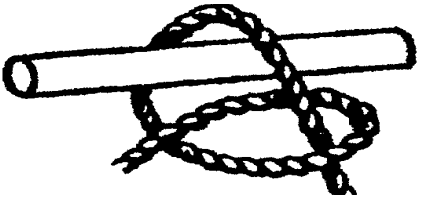
The Reef Knot – is used for joining two ropes of equal thickness. It is also used in first aid for tying bandages. It lies flat, holds well and is easily untied. This knot can also be used for tying packages. To tie this knot remember: 'left over right and under, right over left and under.'



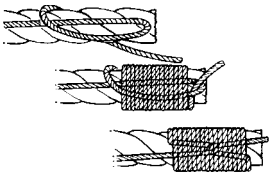
The Clove Hitch – is used to secure a rope to a spar, rail or similar fitting. It will slip along the spar or rail if subjected to a sideways pull. It can be made with the end or with the bight of the rope. To tie the clove hitch, follow the diagram below. Be sure to leave enough rope on the end so that it does not unravel.



The Half Hitch – is used whenever the end of a rope is to be fastened around a spar or ring. A 'round-turn and two half-hitches' is tied by passing the rope around the spar twice, then tying two half hitches – this is a very common knot for tying off shelter cords.



Whipping – Before using a rope, whip the two ends to keep them from unravelling. To whip the ends of a rope, use a piece of twine or cotton fishing line about 15 cm (6 in.) long. Make it into a loop and place it at the end of the rope. About 6 cm (3 in.) from the end, begin to wrap the twine tightly around the rope. When the whipping is as wide as the rope is thick, slip the end through the loop, pull the end of the loop hard, and trim off the twine. Then whip the other end of the rope.



EO 403.12: LIGHT A FIRE

SAFETY

Some safety guidelines to follow are:

a. ensure you have fire safety equipment available to you before staring a fire. This equipment could be a shovel, rake, pail with sand or water, or a fire extinguisher. This equipment stays by the fire all the time. Never light a fire beside a lantern, stove or fuel container;
b. never leave your fire unattended and always ensure the fire is fully extinguished before leaving it;

c. choose a site that is already established as a fire ring/pit/mound, or select a site that is free from combustible ground cover, has no overhanging branches, and is away from buildings (3m). Think about where sparks might fly and pick a site that is appropriate – do not start a fire on a windy day;
d. ensure that you know the regulations concerning fires for the area that you are in. Some parks, conservation areas, and training areas do not allow fires at any time, or may restrict fires when the weather has been hot and dry; and,
e. a small hot fire is more efficient and useful than a large bonfire. Always keep the size of your fire under control, and do not use more wood than necessary to keep it burning.

A FRIENDLY FIRE

Even though stoves have replaced fires as our main method of cooking food, you may still find that a small campfire brings warmth and comfort to your bivouac. Except in survival situations, fires are a luxury, not a necessity.

Campfires can sterilize soil to a depth of 10cm, and overeager firewood collectors can strip a bivouac site clean of all available wood – wood that would ordinarily decay and provide nutrients for plants and insects. Building an environmentally safe and friendly fire takes only a little extra preparation, and makes cleaning up and disguising the fire site after much easier.

Check your area for a sufficient supply of firewood. If there is a shortage in the vicinity, do not build a fire there – this will only add to the shortage of wood. Only collect firewood that you can break with your hands and do not take all the available wood from one place – leave some for future use. Only chop or split wood that has been supplied as firewood by the property manager or owner. Only collect enough firewood for your use – do not stockpile.

If a fire site has already been established, use it. If it is more than 30cm in diameter, remove the excess ashes and coals, distribute them thinly around the area, and reform the site to a ring no larger than 30cm.

If you are in a pristine location, you need a fire site that protects the underlying ground as well as the surrounding environment. The best way of building a safe and environmentally friendly fire is to use a fire

pan – a steel pan at least 30cm across, with 10cm high sides, that you place on top of a dirt or rock platform. Build your fire in the pan and you can use the sides to hold up a grill for cooking.

As a second choice you can build a platform about 15cm high and 30cm across, from sand and dirt to place your fire ring and fire on. Place the sand pile on a piece of tarp, ground sheet or a stuff sack to make cleanup easier. Do not dig a hole in order to supply the dirt – find loose sand or dirt that is available.

Lastly, you could dig through the top layers of loose and decomposing matter, called "duff," to the soil below to create a fire pit. Check for root systems that might ignite and carry the fire underground. Build your fire in the pit then return the natural material when you've extinguished it and distributed the coals and ashes.

Do not try to burn food scraps or plastic. When you have finished with your fire, wait for all the ashes and coals to cool enough that you can pick them up with your bare hand. Distribute the ashes and coals by sprinkling them thinly across a wide area surrounding the fire site. Turn blackened rocks down, and distribute the material from the platform back into the area. Fill in any holes as required. This way, your fire site will not spoil the experience of the next users, and you are very sure that it is out!

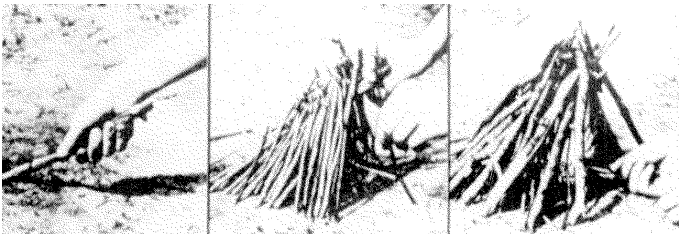
LIGHTING A FIRE

Fire requires three components to burn: fuel, oxygen and heat. Fuel comes in four basic categories:

a. **tinder** – small dry material used to ignite the fire;
b. **kindling** – thin wood smaller in diameter than your finger;
c. **softwood fuel** – from evergreen trees will burn hot and fast and is good for getting a fire going; and,
d. **hardwood fuels** – which are difficult to ignite, but will burn hot for a long time and create hot coals for cooking.

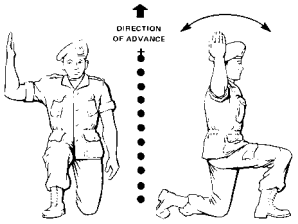


To start a fire, take a small handful of tinder (dry moss, tiny twigs from softwood trees, bark, grass or leaves) and make a pile. Cover loosely with some kindling – you can make a small teepee or log cabin. Be sure to allow space between the kindling for air to get in. Put your back to the wind and ignite the tinder. If there is no wind you may need to blow on the smouldering tinder to ignite it. Once the kindling is burning well, add small softwood, then hardwood fuel. Add more fuel only as required making sure not to smother the fire.

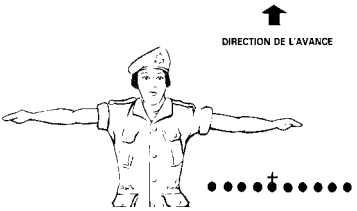


EO 403.13: FIELD SIGNALS AND FORMATIONS

Field signals are used in situations where it would be difficult to pass on instructions verbally such as blowing wind or spread out over a long distance.



SINGLE FILE



EXTENDED LINE



DOUBLE TIME



TURN AROUND



JOIN ME



HALT

EO 403.14: EMPLOY METHODS OF ENVIRONMENTALLY SAFE WASTE DISPOSAL IN THE FIELD

Waste is created by several activities by members of your team. Packaging material from IMP's or other food sources, damaged equipment, accidental spills, careless use of equipment, and human waste, all create waste that must be dealt with properly.

FOOD AND MEAL WASTE

Divide waste from IMP's into paper, plastic, foil, and cardboard. Pack this waste out and recycle where appropriate. Remember to encourage teammates to finish all the food they open, and not to dump food scraps or extra liquid on the ground – it is polluting, and it **will** attract animals. Tin cans, glass, plastic containers and other food related garbage can be treated the same way. Do not try to burn any of these. Large groups staying in one bivouac site may set up a garbage point. Collect garbage after each meal and place it in doubled bags.

WASTE FROM EQUIPMENT

Damaged and broken equipment is a common source of pollution, either from the broken pieces being left around or fuel (or other liquids) leaking out. If equipment is broken or damaged, and repair is not possible, ensure you have all the pieces picked up, mark the device as not serviceable, and return it/pack it out. If fuel or oil has leaked from it, you will have to clean that up as well. Naphtha fuel will evaporate quickly, so a small spill will soon disappear, large spills (more than 500ml) will have to be brought to the attention of your corps' environmental officer immediately. Leaked oil will not evaporate. Oil soaked soil will have to be bagged and carried out of the area. Naphtha and oil can be cleaned from equipment easily with a rag, and the rag packed out to be disposed of properly.

Large accidental large fuel spills can be deterred by packing fuel in 1 litre approved fuel bottles. When you refill a stove or lantern always use a filter funnel and take care not to spill or waste fuel. Wipe up spilled fuel immediately, and pack out the rag. Avoid refueling vehicles in the field.

HUMAN WASTE

You have learned of some of the alternatives to using established washrooms to dispose of human waste. Some parks and wilderness areas now require that all solid human waste be packed out of the area and disposed of in an approved septic facility. Avoid putting urine or other liquids in portable toilets.

The CF has a portable toilet, a cardboard box lined with a heavy plastic bag, that is suitable for groups up to 40 to use for a weekend. The bag is sealed and packed out when full, and a new bag can be inserted. This is too large for trekking or canoeing, but can be used where a vehicle can be brought in. For packing, many people make their own portable toilets from pails or surplus steel ammunition boxes. Some even have toilet seats that fit on top. These are useful for canoe or raft trips, and can be used for trekking short distances. For long treks, mountain bike or kayak trips, it is best that each team member has their own small container – the easiest to make is a short piece of 4" plastic pipe with screw-on end caps. Only put human waste and toilet paper in these portable toilets – no garbage, foliage or dirt. You can clean these out at approved septic facilities that will be provided by the park or wilderness area. Be sure to clean the container thoroughly with a toilet brush and a septic-system friendly cleaner. Wash your hands well.

In the winter, only solid waste need be packed out – each person should be responsible for their own. Keep it frozen if you can. Dispose of it down a toilet, and clean and dispose of the bags as required.

To cut down on toilet paper waste you can experiment with broad leaves, moss and even smooth stones – be sure to study the poison ivy picture!



EO 403.15: MAINTAIN SECTION EQUIPMENT

ROUTINE MAINTENANCE

Routine maintenance can be carried out before use and/or **each day** by:

a. cleaning equipment – stoves, lanterns, tools, etc;
b. checking ropes for dirt and damage;
c. check first aid kit, and refill as required;
d. only using the approved fuel in stoves and lanterns, and cleaning spilled fuel immediately;
e. checking sleeping bags and shelters for damage and dirt – clean and repair immediately; and,
f. checking proper operation of stoves and lanterns.

MAINTENANCE BEFORE STORAGE

Before storing equipment for a length of time:

a. ensure all equipment is clean, dry and in good repair;
b. ensure first aid kit is full;
c. ensure all metal tools are sharp and oiled;
d. remove batteries from the radio's, flashlights, etc; and,
e. repair, clean, and refill team storage boxes as required.

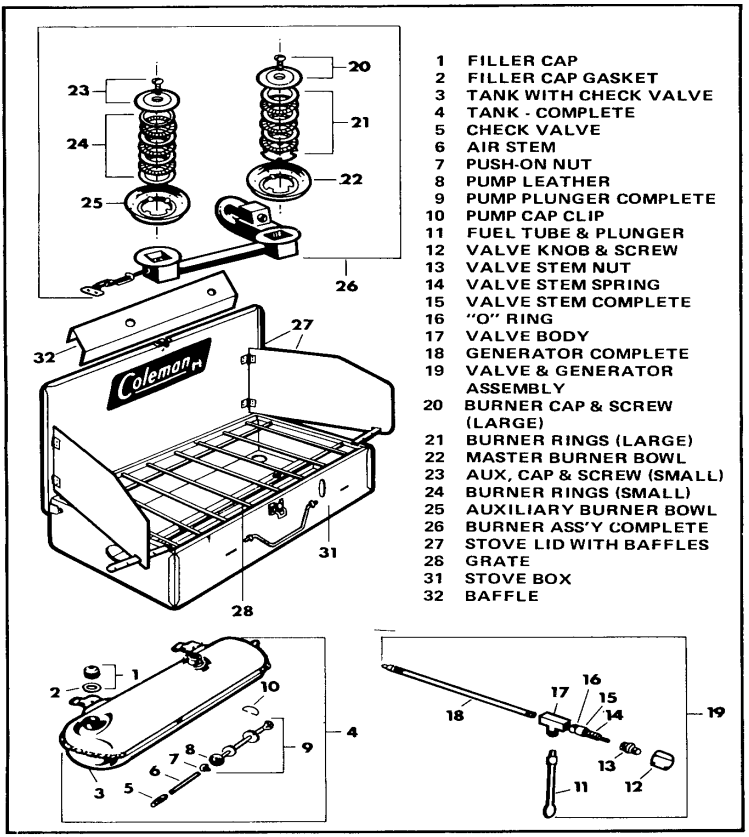
COLEMAN STOVE

2 Burner Gas Stove will produce 21,000 BTUs on main burner alone; 11,500 BTUs on main burner and 9,500 BTUs on auxiliary burner. It has a 1.25 litres fuel tank capacity, and 2 hours burn time on high, 7.5 hours on low. It can boil a litre of water in 4 minutes.

1 Burner Gas Stove wil produce 10,500 BTUs. It has a 550ml fuel tank capacity, and 1.75 hours burn time on high, 6.5 hours on low. It will boil a litre of water in 4 minutes.

STOVE MAINTENANCE AND REPAIR

Coleman two-burner stoves require regular maintenance to ensure proper operation. Remember not to work on a stove until it is cool to your touch.


1 FILLER CAP
2 FILLER CAP GASKET
3 TANK WITH CHECK VALVE
4 TANK - COMPLETE
5 CHECK VALVE
6 AIR STEM
7 PUSH-ON NUT
8 PUMP LEATHER
9 PUMP PLUNGER COMPLETE
10 PUMP CAP CLIP
11 FUEL TUBE & PLUNGER
12 VALVE KNOB & SCREW
13 VALVE STEM NUT
14 VALVE STEM SPRING
15 VALVE STEM COMPLETE
16 "O" RING
17 VALVE BODY
18 GENERATOR COMPLETE
19 VALVE & GENERATOR ASSEMBLY
20 BURNER CAP & SCREW (LARGE)
21 BURNER RINGS (LARGE)
22 MASTER BURNER BOWL
23 AUX, CAP & SCREW (SMALL)
24 BURNER RINGS (SMALL)
25 AUXILIARY BURNER BOWL
26 BURNER ASS'Y COMPLETE
27 STOVE LID WITH BAFFLES
28 GRATE
31 STOVE BOX
32 BAFFLE
Coleman

The most common problems and repairs are:

Problem	Repair
Will not pump – dried-out pump seal	Remove pump assembly and apply oil or lip balm to leather seal until pliable.
Will not light – no fuel at burner	Either the generator is blocked, or there is insufficient pressure in the fuel tank. Check fuel level in tank, pump up the tank and try again.
Lights, but flame is low and yellow	Low pressure in tank, or generator is damaged or blocked. Pump up the tank and see if the flame improves.
Large yellow flame, singed eyebrows	Move your head back, turn the fuel off and wait for the flame to burn down. You may have turned on the fuel and let too much fuel pool in the burner before lighting ("flooding" the stove), or the generator may not be properly seated in the gooseneck. Ensure the generator is pushed fully into the gooseneck and follow proper lighting procedure.
Generator blocked	Remove generator for replacement or repair.

COLEMAN LANTERN

1 Mantle Gas Lantern weighs 3.63 lbs. It has a 750ml fuel tank capacity, and 7 hours burn time on high, 14 hours on low.

2 Mantle Gas Lantern weighs 5 lbs. It has a1 litre fuel tank capacity , and 7 hours burn time on high, 14 hours on low. #

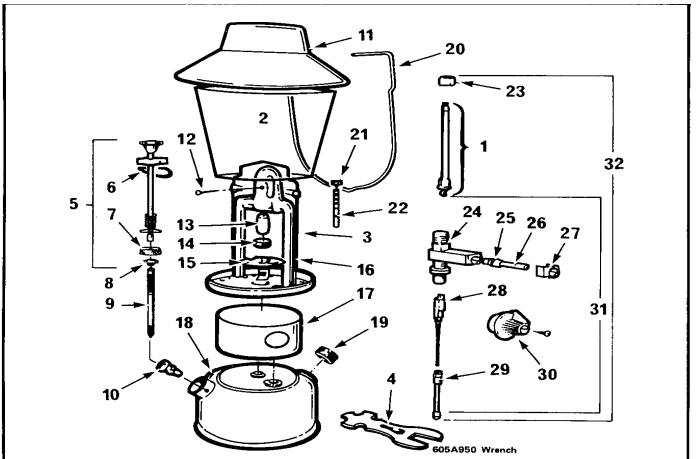
LANTERN MAINTENANCE AND REPAIR

Common problems occurring with the Coleman lantern include damaged or missing mantles, insufficient pressure in the fuel tank, and generator malfunctions as in the stove.

To replace a damaged mantle:

a. remove the ventilator and globe;
b. clean pieces of the old mantle from the burner cap and tie a new mantle in place securely;

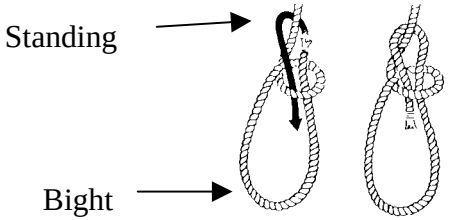
c. just before using the lantern, light the mantle and let it burn to ash (it will remain in place over the burner cap as long as you don't touch it, or shake the lantern; then,
d. replace the globe and ventilator, and follow correct lighting procedure.



1	GENERATOR	18	FOUNT WITH CHECK VALVE
2	GLOBE	19	FILLER PLUG
3	MANTLE (NOT SHOWN)	20	BAIL
4	WRENCH (ACCESSORY)	21	NUT
5	PLUNGER ASS'Y LESS AIR STEM	22	STUD
6	PUMP CAP CLIP	23	GENERATOR JAMB NUT
7	PUMP LEATHER	24	VALVE BODY
8	PUSH-ON NUT	25	"O" RING
9	AIR STEM	26	VALVE STEM WITH "O" RING
10	CHECK VALVE	27	SPRING CLIP
11	VENTILATOR	28	ECCENTRIC BLOCK NEEDLE & "O" RING
12	SCREW FOR BURNER TUBE	29	FUEL TUBE
13	BURNER TUBE	30	KNOB & SCREW
14	BURNER CAP & SCREEN	31	VALVE ASS'Y. LESS GENERATOR
15	HEAT SHIELD	32	VALVE & GENERATOR ASSEMBLY
16	BURNER FRAME		
17	GLOBE BASE REST		

EO 403.16: TIE A KNOT

The bowline – is often called the rescue knot as it makes a simple loop that does not slip. It can be used to tie around yourself or throw to someone who needs a lifeline (or to tie to the bow of a ship).



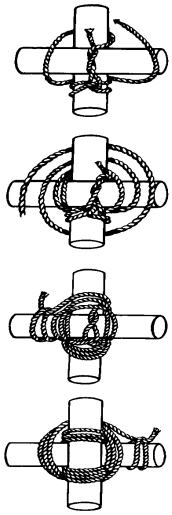
a. make a simple overhand loop (looks like the # 6);
b. pass the short end through the hole from the bottom;
c. bend the end around the length, and pass it through the small loop just formed and alongside its own continuation; and,
d. tighten the bowline by holding onto the bight formed by the end and pulling hard on the standing part.

The fisherman's knot – is used to join fishing line and ropes together:



a. tie an overhand knot in one of the ropes, do not tighten it; and,
b. pass the other rope end through the loop, and tie an overhand knot.

A square lashing is used to lash spars which cross at a right angle, touching where they cross.

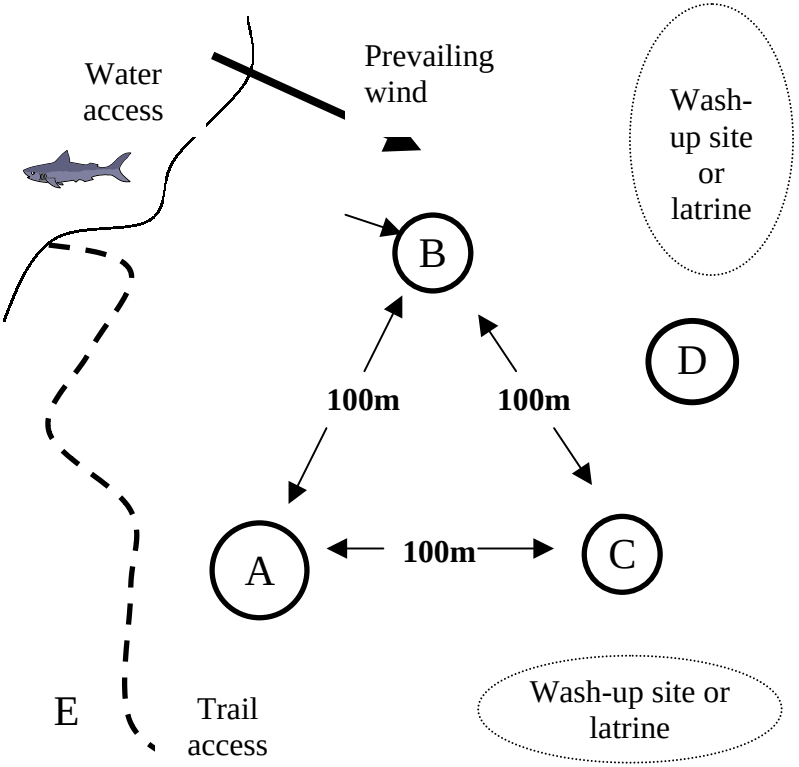


REMEMBER: Start with a clove hitch, do three or four wrappings, frap twice, and end with a clove hitch.

Back view

EO 403.17: IDENTIFY BIVOUAC SITE AND ALL ITS VARIOUS COMPONENTS

BIVOUAC SITE – PRISTINE WILDERNESS LOCATION



A – sleeping area
B – kitchen
C – food hang
D – POL point
E – garbage point (animal-proof)
1 – HQ, first aid and stores
2 – male lines
3 – female lines

A – Sleeping area organization

1

2 **3**

A bivouac site in a pristine wilderness location looks different than an established campground. Each component of the site is spread out, both to make the impact less severe on one area, as well as to protect your team from unwanted visits from local animals. Note that the prevailing wind blows cooking, latrine and garbage smells away from your sleeping area.

In an established campsite, the locations for latrines, wash-up areas, shelters and kitchen may already be set for you. Be sure your team members use these established facilities.

Remember to avoid areas that show little use or damage – choose another location to allow that site to fully recover.

TIPS FOR FINDING A GOOD BIV SITE

The key to a good biv site is planning. Do not wait until the last moment before dark to pick a site. Look at your map and have a couple of areas picked out before you arrive. Give your team at least one hour of daylight to get set up and a meal cooked. You can judge how much daylight you will have by keeping track of when it gets dark on the days leading up to your activity, or by holding your hand horizontally under the sun – for each finger width between the sun and the horizon, you have about 15 minutes. If you are using established sites, plan your travel to ensure you arrive in time.

Choose a location that is large enough for your group. Look for a source of clean water, privacy for wash-up and latrine areas, dry level sites for shelters, and a safe place to hang (hide) your food. Remember to select places where the ground cover is very durable – grass, sand, rock, clear forest floor or snow. Avoid wetlands, ferns, new undergrowth or delicate foliage.

In the winter, or cold weather, choose a site that is protected from the wind. A location half-way up a hillside, with a south exposure, is a good place. Cold air will pool in valleys and depressions and hilltops are subject to strong wind.

Heavy vegetation, wet land and dense brush are havens for insects in warm weather. Look for a site that has some open areas for wind to blow through. Higher altitudes will have fewer bugs.

Always check for danger – overhead branches, loose rocks on slopes, or large amounts of snow uphill. Look for signs that your site might be subject to flooding in heavy rain, and avoid obvious paths for mud, rock or snow slides.

Choose a site that is visually pleasing. Your team's morale and motivation will improve with a nice biv site.

BIV SITE ORGANIZATION AND SAFETY

Keep your site organized by ensuring that all team members know exactly where each component (kitchen, sleeping, latrine) is planned to be. Once shelters are erected, all personal kit is placed in or beside each person's shelter. All guy lines for shelters should be low and not strung across footpaths.

Team equipment can be placed at the HQ or placed in an obvious location for team use. Return all equipment to its location after use.

A well organized and clean biv site is very important if the weather gets bad, or if there is an emergency. Prepare a small sketch map of the site with each shelter and a list of its inhabitants.

If you have containers for POL (petroleum, oil, lubricants), then you will need a safe place for storage and refilling stoves and lanterns. Pick a visible site, downhill and downwind from the kitchen, with a solid and level surface. Stoves and lanterns not in use can also be stored there. Ensure that no one lights a stove or lantern at the POL point. Use a flashlight at night for refueling.

FOOD HANG

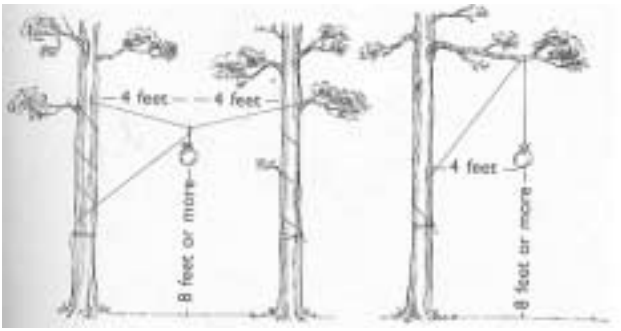
All animals are attracted to food. This is why it is very important that when you are out on An expedition that you "animal proof" your food. This could include locking it up in your vehicle, putting it into animal-proof food containers or barrels, or hanging food packs from a tree.
Before you select a site to hang your food you should be looking around for animal indicators. These can include tracks in the snow, sand, dirt or on a path. Look for signs on the trees like claw marks, missing bark, and look for scat on the ground. Avoid areas with berry patches, acorns or nutcrops on the ground, and orchards – these attract

not only humans but animals. Some parks and wilderness areas provide animal proof garbage and food areas.

When you hang up your food pack, remember that you are to include all of your food, snacks, gum, candy, any beverage, plus toiletries. In another pack you should put all of your cooking utensils, pots, pans, and all clothing that you cook in. You should never go into your tent with the clothing that you cooked in – change right after cooking and wash your face and hands after meals.

To hang your food and equipment:

a. make sure the tree is at least 100m from your camp site and cooking area;
b. find a tree with a strong branch at least 6m from the ground. If one is not available use a rope attached to two trees;
c. make sure the pack is at least 5m off the ground and 2m from the tree trunk;
d. if available you can hang food over a rock face or cliff for the night; or,
e. if the above is not available, hide your food in air sealed containers under bushes and rocks away from any path or trail. You can place pots on top to act as a warning device and deterrent.



EO 403.18: OBSERVE HIKING TECHNIQUES

Walking with a pack is different than just walking. There are techniques that will make you more comfortable and efficient. Always stretch and warm up before starting a trek.

FOOT CARE

Use a comfortable insole and ensure that you change your socks regularly on a long trek. Keep your feet dry – use foot powder to keep your sweat from soaking your socks. By wearing two pair of socks, friction is reduced on your skin, and moisture can be drawn away from your foot into the outer sock.

Check your feet every hour and reapply powder or change socks as required. Treat all "hot spots" and blisters immediately. Always carry some adhesive bandages and blister treatment (like moleskin) for foot care. Avoid popping blisters unless you can be sure that the area and implements are sterilized. Do not be afraid to stop your team if you, or a teammate, is having foot problems or needs to dry out feet after a dunk. Time taken in prevention is always less than being slowed down by injuries or emergencies later on.

Keep your boots dry! Avoid wade into water unnecessarily, and air them out at rest stops and overnight. Do not tuck wet socks into them at night.

ENERGY CONSERVATION TECHNIQUES

When you are on a trek, you want to conserve your energy so that you will have spare energy to deal with a changed plan or an emergency. Prepare yourself by being well fed, well rested and physically fit before you start a trek. Stretch and warm up well before you start. Being overly tired increases your chances of accidents, injuries and making poor decisions.

A good indicator of efficient walking is your rate of breathing. Heavy, laboured breathing is a sign you may be working too hard. Your muscles need sufficient oxygen to work well, and breathing normally and rhythmically allows enough oxygen to transfer into your bloodstream. On level ground, carrying a pack, an average person will take one full breath in and out per 3 paces. On difficult terrain your rate of breathing should increase, but do not let yourself get to a point when you are struggling to breath evenly (gasping or wheezing).

Work with your teammates to create a suitable pace that everyone can manage. Pace is adjusted by two means; changing the length of each stride, or changing the speed of each stride. It is like changing gears on

your bike. Difficult terrain can be crossed with short fast paces, easy terrain may be better suited for long relaxed paces. The best judge of pace is whether the team has to stop often and the pace slows gradually during the day, or whether the team can maintain the pace throughout the day with only the regular rest stops. Do not treat trekking like a race – the fastest team doesn't win.

Each step you take should feel relaxed. Place each foot on the ground in front as flat as possible, not heel first. Use your thigh muscles to swing your leg forward. To increase your pace, place your foot further in front, rather than just trying to push harder with each stride. When going up steep slopes use a "rest step" – pause between each stride on a straight leg.

TEAMWORK

Set each team member up with a partner, including yourself. They should talk when they can (being able to talk is a good sign that no one is being pushed too hard), and check each other for signs of injury. Remember to set the pace to the slowest member of your team. Using up the energy reserves of a teammate is dangerous! It creates an environment where injury is more likely, as well as lowering team morale. Put slower hikers up front or in the middle with a strong "buddy."

REST STOPS

Establish a routine of rest stops during the trek. Always stop briefly 10 minutes into the trek for people to check their equipment (boot laces, loose straps, etc), then stop for 10 minutes every hour – or if you are on tough terrain, 5 minutes every half-hour. The time taken for a break may vary due to circumstances. Use the opportunity to check feet and to ensure everyone is drinking water. In hot weather check for sunburn and signs of heat exhaustion. In cold weather check for frostbite and hypothermia. Ensure your team doesn't block the trail during a break – move at least 10m from the trail where possible. Watch out for rapid cooling while resting – put on an extra layer to keep warm, especially in cool, wet or windy weather.

TREKKING TECHNIQUES

When walking on an established trail avoid increasing your pace because the going is easier. Keep team members well spaced (2-3m day time, 1-2m night), and don't allow shortcuts or unnecessary detours around puddles/obstacles. On roads, keep well to the side facing oncoming traffic and ensure vehicles can see you. Carry reflective safety vests when you plan to walk on roads. If you meet another group, move to the side to allow them to pass. Be cautious around horses or other pack animals on the trail – move well off the trail and do not make sudden movements or noises.

Small footpaths and game trails in the woods make great trekking trails, just remember that the animals or people who made these trails may not have been going where you want to go. Always keep track of your position on a map. Do not follow trails blindly.

Walking off-trail is both exhilarating and challenging. Navigating, obstacle crossing, and safety concerns make "bushwhacking" all the more interesting! Ensure your teammates keep their spacing to avoid branches swinging back, and to be able to see upcoming danger. Beware of pushing rocks or snow down on teammates, always check up and down a steep loose slope before crossing.

When walking up a steep hill, keep your body straight. It will be easier to regain your balance, and if you fall at least you will fall forward. Take small steps and try to always keep going up – rather than cross an obstacle that would require you to climb up and then down the other side, find a route around that lets you stay at the same height, or increase slowly. If you can't easily step over it, go around. Reduce the angle of the slope by walking across rather than straight up – this is called "traversing." Keep the angle less than 45^{o}.

Walking down a steep hill is as difficult and dangerous as walking up. Keep control of your speed and watch out for loose soil, snow, ice or loose/wet rock. Keep your knees slightly bent and place each step gently to reduce the impact and friction on your feet. Try to step on the uphill side of obstacles and rocks.

CROSSING OBSTACLES

When crossing boulders and land obstacles plan your route before starting to cross. Always choose safety over convenience. If you wear your pack across, keep all your straps tight to keep the pack close to your body. You can always take your pack off for difficult obstacles and hand it over to a teammate – on long obstacles make a chain of people to ferry packs. On difficult obstacles one person can act as a spotter for the next. Keep your hands free for balance – do not try to carry something while crossing. Ensure that the obstacle doesn't become too crowded, keep extra distance between each person.

Do not try to wade through a water obstacle where the water is above your knee, or if the water is fast flowing. Always be sure you can see the bottom clearly. If the water is murky and you can not see the bottom, find another way across. Examine the consequences of falling in before considering crossing a makeshift or suspicious bridge. Do not risk falling into deep, cold or dangerous water because you are too lazy to look for another route. With the appropriate safety equipment, your officer may choose to cross or make a bridge. Only cross a deep or unknown water obstacle with the direct supervision of an officer. When you cross, either remove your pack and ferry it across (ensure it is waterproofed!), or carry it on your back with the waistbelt and sternum strap undone, and be ready to remove your pack if you fall. Do not cross a water obstacle alone. You can use a walking stick as an aid for balance and cross in pairs or groups. If the bottom is smooth, you may want to remove your boots and wear running shoes or sandals across. If the bottom is rocky, wear your boots – if the water is not too cold you may want to remove your socks to keep them dry. Always give your team time to dry their feet after crossing. In cold weather consider the consequences of a teammate getting soaked before risking a water crossing.

EO 403.19: PREPARE FOR AN EXPEDITION

What is an expedition? An expedition is an organized voyage or journey across land or water, with a specific aim in mind. For example; a weekend trek in a local park to give junior cadets leadership practice, a seven day trek through Riding Mountain National Park for Duke of Edinburgh Award qualification, or a canoe trip through Algonquin Park as part of a Regional Expedition.

To prepare yourself for an expedition you must be physically and mentally ready to go. To be physically ready, you must be physically fit (at the appropriate fitness level for the expedition, and not have any recent or recurrent injuries), your personal and team equipment must be ready, and you need the expedition plan and map. To be mentally ready you need to be prepared for an emergency, able to communicate, and have a clear understanding of the expedition aim. As a team leader, you will have to assist your teammates with their preparations as well. The golden rule is, "Check, then check again."

PREPARING EQUIPMENT

The expedition plan will have a list of kit each person is required to bring, as well as equipment that will be issued – personal and team. A few days before the expedition, check the weather forecast for the expedition dates. Note both high and low temperatures, as well as wind speed and precipitation. Few weather forecasts are exactly right, but it will be a good guide for choosing clothing. Go hour by hour, or event by event through the expedition plan, and make a checklist of equipment and clothing you think you'll need. Some small equipment may be left off the plan list and you have the option of bringing extra stuff – remember that you will have to carry it.

Lay all your kit out and check each piece for serviceability and cleanliness. Wash and fix it as required. Ensure batteries are in your flashlight, and check your survival kit for all the appropriate items. With experience you will be able to create master kit lists of your own for each season and each different activity – one list for canoe trips in the fall, one for trekking in the winter, etc. Always check your kit before the expedition – once you have started it is too late to remember you have no toilet paper, or that there's a hole in your rain jacket.

When you are issued team equipment, check it as well. Set up the tent to make sure there's no holes and that all the parts are there. Light the stove and lantern and let them burn for 5-10 minutes to be sure.

Check your copy of the expedition plan and map before leaving. Look for changes in the route, discuss possible problem areas, and make sure you know what the emergency plan is and what to do in an emergency.

When you finish an expedition check your kit again and fix and clean right away! If your kit is clean, dry and in good order when it gets put away, it will be quicker and easier to get ready for the next expedition.

PREPARING YOURSELF

You must be ready. Get yourself into good physical condition and stay there. You will not be able to lead or contribute to your team if you can not keep up. All leaders need to be capable of completing the physical aspects of an expedition so that can react to emergencies and changes in plans. It is important to build up to an expedition. Start off slow, over easy terrain, then move up to progressively longer distances and more difficult terrain. You do not need to be the fastest of strongest on your team – but you should be at least at the team average. The wilderness treats everybody the same, it will not go easy on you because you were not ready.

Make sure your technical skills are ready. Practice the small skills so that you can teach and perform them easily. Your teammates will not have confidence in you if you struggle through tying knots, setting up a shelter or navigating. Seek advice from experienced cadets and bring some notes or this manual with you if you think you will need something to act as a reference.

During the expedition, take a few moments to assess how things are going and do not let yourself get overconfident or overtired. Allow your teammates to help you if you need it – pass over some smaller responsibilities to competent teammates so that you can concentrate on the important stuff. Be confident enough to respect your personal limits and stop if you need to. Write down your thoughts and reactions, as well as memorable events in your journal.

Ask yourself:

a. am I ready?
b. is the team ready?
c. do I need to practice any skills?
d. are there new skills required from me or the team?
e. does the team need practice time?
f. what is the weather forecast?
g. do we have food, water, a place to sleep?
h. do I understand the emergency plan, the route and the timetable?

PREPARE FOR EMERGENCIES

Emergencies can happen any number of different ways. Sudden changes in weather, accidents, natural disasters, poor decisions by one or more people, or even attacks by animals. You can lower the risk to your team by making reasonable and sensible decisions, and by following established safety guidelines. Communicate with your team and ensure they understand your aim and instructions. Establish a team plan for what each member will do in an emergency.

Monitor the members of your team for injuries and exhaustion. Remember that few emergencies in the wilderness are caused by a single event. Most emergencies are the product of a chain of events and decisions.

Carry a first aid kit and ensure all team members know where it is and how to use the components. Encourage all cadets to qualify in First Aid training.

One of the most stressful wilderness situations is getting lost. Some people panic when they realize they are lost, and by running around they make themselves even more tired, disoriented and confused. Remember **STOP** from EO 403.04.

EO 403.20: DISCUSS DANGEROUS ANIMALS

BEARS

Bears pose a distinct threat to you and themselves. They will often visit areas inhabited by humans, usually to their own detriment. Inform yourself as to signs of bear activity, and avoid areas where you suspect bear activity or where bear warnings are posted (e.g. garbage dumps, in some areas of national parks). There are several breeds of bears you may encounter in Canada. The most common are Black bears, Grizzly bears, and Polar bears.

Some things you can do to decrease dangerous bear encounters are:

a. Plan your expedition with protection from/for bears in mind – keep your clothes, equipment and biv site clean;

b. avoid known bear habitats, and where possible plan what you'll do in the event of an encounter; and,
c. research your route and bivouac sites for recent bear activity.

Do not surprise a bear. Never startle, crowd, corner, pursue or approach a bear for any reason. The space a bear needs to feel unthreatened varies from a few feet to several hundred metres.

Control bear attractants. Bears have a strong sense of smell and, as omnivores, they are attracted to just about any food source. Minimize foods with strong odours (e.g. bacon, fish), perfumes, and scented toiletries (sunscreen, shampoos, etc.).

Properly dispose of all garbage or seal in an airtight container. Wash all equipment (packs, sleeping bags, stoves, etc.) before bringing to the wilderness and again if they get food spilled or cooked onto them. Clean pots, dishes and utensils immediately after use. Dispose of waste water at least 100m away from cooking and bivouac sites.

Do not feed bears. Keep as clean as possible. Do not sleep in the same clothes you ate or cooked in. Choose unscented personal hygiene items and secure them overnight in the same manner as food – away from the bivouac site. Used feminine hygiene products should be sealed in a plastic bag and packed out as garbage – do not try to burn or bury them.

Do not learn about bears the hard way. Research bears habits and habitats for the area that you will be camping and or visiting; learn how to avoid mishaps and what to do in the case of an emergency.

Inform yourself on the appropriate action to take if confronted or attacked by a bear. Read research material, always travel in a group of four or more, and take precautions to protect you and the bear. Carry bear repellent spray (or other deterrent) for use only as a last resort. Report bear encounters to the appropriate authorities as soon as possible. Some people choose to wear bells attached to their packs to alert bears that may not be within sight.

In the case of confrontation or attack, stick together and keep your pack on. Face the animal and back away slowly. You can not outrun or out-climb a bear so do not try.

WILDCATS, AND OTHER DANGEROUS ANIMALS

Bears are not the only dangerous animal in the wilderness. Wildcats, wolverines, wild dogs, and even moose can be dangerous when provoked, or while hunting. It is your responsibility to protect yourself, as well as them, from harm. Follow the steps for bear-proofing yourself, your kit, and your biv site.

Cougars, mountain lions, and pumas are all the same species of large wildcat. They are rare, however their population is increasing, and the expansion of human development is encroaching on their natural habitat. Take the same precautions as for bears. When a wildcat attacks it is usually hunting and will target what it thinks is easy prey. By staying in a group and keeping your pack on, you will likely not look much like lunch.

Never provoke a big animal. Moose, caribou, elk, musk ox, and even domestic cattle will protect their territory and their young. Give them a polite amount of space. If confronted, stay in a group and back away slowly. Think of the headlines, “Cadets trampled by Bessie the cow.”

Report all animal attacks to local wildlife authorities.

POISONOUS SNAKES

Poisonous snakes are rare in Canada. Rattlesnakes live in limited numbers in south-western Ontario and south-central BC. Bites are painful but not usually fatal. These snakes will likely be found on warm rocks, or curled up in crevices and under rocks, in dry and warm climates during the summer months (May to Sept). Give them their space as they will only attack in self-defence.

Any bite victim must seek medical attention immediately. Move the victim away from the snake to avoid a second bite. Treat victims by rinsing the bite area with clean water, applying a cold compress, immobilizing and elevating the bite area, keeping them calm and transporting them with the victim at rest. Be prepared for the victim to develop respiratory problems. Do not apply a tourniquet.

Report a bite or sighting to local wildlife authorities.

COMMUNICATIONS

For some training you may be issued a radio to assist communications between teams and the headquarters, or other components of your corps. While the mechanics of a radio, its range, type of antenna, etc. will vary, the way that you talk “on the air” is guided by national and international standards. The skill of talking on a radio is referred to as “voice procedure.”

The phonetic alphabet is a universally recognized radio communications aid, which assigns a common word to represent each letter of the alphabet. You use the phonetic alphabet when you have difficult words or groups in the text that you are communicating. When you are going to spell a word you would say, "I SPELL" _ _ _ _. Example: "Home base just to let you know the – I SPELL Charlie Alpha Kilo Echo is ready"

Numbers are often used to give a grid reference or numbers of items. When you are about to tell numbers on the radio you would say "FIGURES" _ _ _ _. Decimal are: DAY-SEE-MAL. Example: "Home base we had chili last night, and we need FIGURES Wun Fife Zero rolls of toilet paper quick!"

A Alpha	**B** Bravo	**C** Charlie	**D** Delta	**E** Echo	**F** Foxtrot
G Golf	**H** Hotel	**I** India	**J** Juliet	**K** Kilo	**L** Lima
M Mike	**N** November	**O** Oscar	**P** Papa	**Q** Quebec	**R** Romeo
S Sierra	**T** Tango	**U** Uniform	**V** Victor	**W** Whisky	**X** X-ray
Y Yankee	**Z** Zulu	**1** WUN	**2** TOO	**3** TREE	**4** FO-WER
5 FIFE	**6** SIX	**7** SEV-EN	**8** AIT	**9** NIN-ER	**0** ZE-RO

Operating Rules:

a. emergency calls take priority over all other calls. If you are talking then stop and wait until the emergency is finished;
b. do not chat;
c. be brief – write down your message before talking; and,
d. profane, indecent or obscene language is forbidden.

To aid in security and keeping the message short, key people have been given appointment titles. Prowords are words or phrases that have assigned meanings for the purpose of expediting messages.

Position	**Call Sign**
Commander	Sunray
2I/C	Sunray Minor
Medical Representative	Starlight
Movements Staff	Contractor
Supply and Transport	Playtime

Proword	**Explanation**
Acknowledge	the message has been received
Affirmative/ Roger	yes, or permission granted
All Stations	the following message is for everyone
Correction	an error has been made. The correct version is
Fetch	go and get this person
Figures	numbers are to follow
Go Ahead	proceed with your message
Grid	used before any grid reference
I Say Again	When you are saying the message again for clarification, don't use the word repeat for this.
I spell	used before you spell a word phonetically
No Duff (MayDay)	emergency command or transmission
Message	a message that you will have to record follows
Negative	no, or that is not correct
Out	conversation ended, last word spoken
Over	my transmission is ended and I'm waiting for a response
Radio Check	what is my signal strength and readability
Send	I'm ready for your message
Sitrep	situation report
This Is	lets you know who is sending the message

Wait	I must pause briefly (up to 5 seconds)
Wait Out	I must pause for longer than a few seconds, I will contact you when I'm ready to proceed.

RADIO NET

Each team with a radio has to have a number to distinguish themselves. It usually start's as home base is ZÉRO, team 1 is 'ONE,' team 2 is 'TWO' etc. When you start a transmission you say whom you want to talk to, then who you are. After they reply you start your message with who you are – then the message.

Example 1: ONE, this is ZÉRO over..
ZÉRO, this is ONE, SEND OVER..
ZÉRO, how is everything at your location OVER..
ONE, everyting is good OVER..
ZÉRO, ROGER OUT

EO 403.21: DISCUSS SURVIVAL PSYCHOLOGY AND STRATEGY

INTRODUCTION

Not too many people plan to get lost and have to survive outdoors. In fact, what makes a situation one of survival are the circumstances of emergency, or sudden departure from the plan. Getting lost and having to sleep out overnight, in a tent, with all your kit is not survival – it is camping.

So, a survival situation is the absence of all, or most, of the equipment and conditions you expect in a routine outdoor experience. Injuries, accidents, severe weather, human error, or quite often, a combination of several factors lead people into survival situations. It is when you are left outside with only the contents of your pockets that you are faced with the real life or death struggle of survival.

Recent search and rescue statistics tell us that 92% of people that die when lost, die within the first 4 days (with 50% of mortalities occurring within the first 24hrs). This puts a new perspective on survival strategy. Before you need to learn how to hunt or trap animals, or select edible plants, you simply need to be able to live through the

first few days – with heat, shelter, water, and the ability to assist searchers in finding you.

If you survive the first few days, then you can afford the luxury of scavenging for food.

THE SURVIVAL PRIORITY LIST

First Aid – for yourself and others. Treat all injuries to the best of your ability. Any health problems left untreated can severely affect your ability to carry out all the other actions required for survival. Complete first aid also includes observing and analyzing current or future dangers.

Fire – is a lifesaver! It will provide an important source of heat, assist in providing safe drinking water, and will be a primary tool for signaling your location to rescuers. Even under wet conditions you can start a fire. Gather what you think is enough firewood, then times that by four, that should be enough. Start collecting wood far from your site, then as you grow weaker, collect from closer in.

Shelter – is what is going to keep you alive for any extended period of time. You need your shelter to be waterproof, windproof and as insulated as possible. Select a safe location, protected from the elements, but close to a clearing for your signal, and as close as you can to fresh water.

Signals – a clearing is the best place to make a signal, anything can be used to make your signal. Toilet paper, rocks, fire and smoke, a mirror, piles of branches, patterns in the snow, etc. Place objects in the form of a triangle as this is a universal distress signal. Bright fire during the night, and smoky fire during the day are your best signals.

Water – you can only survive for three days without water. Heating the water to drink will increase your body core temperature in poor conditions. Always melt snow before ingesting as it uses more fluid for your mouth to melt snow than a mouthful of snow provides. Remember the rules for safe drinking water – do not make yourself sick by drinking water from a suspicious source.

Food – you can go a long time without food if you are conserving your energy and body heat. You can not rely on the availability of large

game, or your ability to catch it to provide food. In some locations plants with nutritional value may be sparse. Choose food that will give you more food energy than the energy you will expend trying to get it. In most cases the simplest of food sources is the best. Some of the simple things to eat are:

a. snails (lakeshores, forests and fields – boil them);
b. bugs, ants, grubs, grasshoppers and maggots (under rocks, logs, near fields – wash them before boiling, or roasting); and,
c. plants: in the north, rose hips are good (eat the flesh and get rid of the seeds and bristles), cattails (eat the roots of them).

There are many other edible things in the wilderness. You can enhance your awareness through proper research, preparation and cooking.

HEALTH AND SURVIVAL

As a cadet, you have access to good training and equipment for use in the outdoors. However, regardless of how good your equipment is, or how skillful you are, people faced with a survival situation still have themselves to deal with. The psychological reactions to the stresses of survival often make them unable to make use of their available resources of equipment, experience, and skill.

By neglecting aspects of your mental or physical health in an emergency, you limit your ability to think and act. As a potential leader of a group of people faced with survival, your health may be the key to their survival as well.

Drink water regularly, eat when you can, conserve your energy, and keep a positive attitude. Do not sacrifice your long-term health for immediate gratification – e.g. wait until the meat is fully cooked before eating it, or do not drink straight from the creek. You know the rules, and you have the training – two of the most important tools for survival.

THE PSYCHOLOGY OF SURVIVAL

Fear – is a very normal reaction for people faced with an emergency which threatens any of their important needs. Fear influences your behaviour, and thus your chances for survival. Acceptance of fear as a natural reaction to a threatening situation will lead to purposeful rather than random behaviour, and in this way will greatly increase your

chances for survival. Fear and confidence are not opposites – a reasonable person can acknowledge fear and still remain confident in their ability to overcome it.

How people react to fear depends more on themselves than on the situation. Physical strength may not be as effective a tool against fear as a sense of humour, or a cool head under pressure. Some fears can lead directly to a sense of helplessness and hopelessness. Fear must be recognized, lived with, and if possible, used to your to advantage by channeling your excess energy created by adrenaline towards the tasks at hand. You can fight this by identifying each fear, understanding it, and coping with it.

Fear of the unknown – "What is out there? What's going to happen to me? Where is it safe?" By accepting this fear as normal you can remain calm and begin to answer each question. Do not criticize yourself for having critical or negative thoughts, just concentrate on, and resolve each new question or problem calmly and confidently.

Fear of your own weakness – leads to a pessimistic attitude and then giving up. Every person can do something, no matter how bad the situation, to make that situation better for themselves and their teammates. Have confidence in your equipment and your skill to use it. Compare the current problem with successful solutions you have used (or learned about) in the past to get through something similar.

Fear of discomfort – is what causes people to continue into bad storm to get back to the warmth and security of base camp, instead of stopping and making a safe, albeit uncomfortable, emergency shelter for the night before they are soaked, exhausted and hypothermic.

Fear of being alone – even the most independent people can feel the effects of loneliness unless steps are taken to adapt to, and deal with the isolation. A strong imagination and sense of humour will help.

Phobias about the dark, or animals, etc. – people with phobias can easily imagine their worst nightmares coming true, especially in the stressful survival situation. Again, approach each fear with a action plan and an understanding of this fear in context with the whole situation – should your fear of snakes cost you your life?

Fear of suffering or death – actually might be your strongest ally in survival. If you always keep it in your mind that unless you act you can die, you can use this energy to focus yourself in tough times. By accepting this fear, and not dwelling on it, you can rate your plans on whether a specific action is going to keep you alive or not. Have confidence in your teammates', your leader(s) and your rescuers' abilities to get you out.

"Courage is not about being free from fear. Only a fool is fearless. Courage is the ability to do the right thing, and do it well, even when you are afraid." John Graham.

SEVEN ENEMIES OF SURVIVAL

Pain, cold, thirst, hunger, fatigue, boredom and loneliness everyone has experienced these, but few have known them where they have threatened their survival. In the survival situation, the feelings of pain, cold, etc, are no different from those experienced elsewhere; they are only more severe and more dangerous. With these feelings, as with fear, the more you know about them and their effects on you, the better you will be able to control them, rather than letting them control you.

Pain – is your body's way of making you pay attention to something that is wrong with you. Hard or desperate work will sometimes cover pain for a while, but pain is unlikely to cease on its own. Carry out appropriate first aid to the best of your ability. Pain that is ongoing will seriously impact your ability to remain positive and get required work done. So deal with it right away. Some injuries or illnesses may not be curable, and you can expect your situation to be uncomfortable. Keep your mind occupied with the important work, and allow enough time for rest and recuperation.

Cold – is a much greater threat to survival than it sounds. It not only lowers your ability to think, but it also tends to lower your will to do anything but get warm again. Even a few degrees drop in your body temperature can affect your ability to make reasonable decisions. Fire and shelter are your primary methods of keeping warm, in any season – you will not have the energy to work to stay warm for any real length of time.

Thirst – even when thirst is not extreme, it can dull your mind. As with pain and cold, lack of water will slowly degrade your ability to survive.

Diarrhoea caused by micro-organisms in unsafe water can slowly dehydrate you and lead to future difficulties, but do not abstain from drinking out of fear. Make a point of drinking regularly

Hunger – is dangerous because of the effects it can have on the mind, primarily in lessening the person's ability for rational thought. Both thirst and hunger increase a person's susceptibility to the weakening effects of cold, pain and fear. Solid food is not a real necessity until a week or more has passed – this is not to say that you would not eat given the chance. It is usually the fear of starving to death – a fear that manifests itself long before the risk of starvation is real – that leads people to making poor decisions about safe or appropriate food.

Fatigue – even a very moderate amount of fatigue can reduce mental ability. Fatigue can make you careless it becomes increasingly easy to adopt the feeling of just not caring. This is one of the biggest dangers in survival. The confused notion that fatigue and energy use are directly related may be responsible for many deaths in survival situations. Certainly, there is a real danger of over-exertion, but fatigue may actually be due to hopelessness, lack of a goal, dissatisfaction, frustration or boredom. Fatigue may represent an escape from a situation that has become too difficult. If you recognize the dangers of a situation, you can often summon the strength to go on.

Boredom and Loneliness – are two of the toughest enemies of survival. They are dangerous mainly because they are unexpected. When nothing happens; when something is expected and does not come off; when you must stay still, quiet, and alone, these feelings creep up on you. Keep yourself busy, even if it means creating luxuries around your shelter, fishing or setting traps, etc.

ATTITUDES FOR SURVIVAL

“I can handle this” – the willingness to approach the situation in control, and with confidence, will go a long way towards getting you out alive. This confidence can be generated by being prepared for emergencies, by accepting that “it can happen to me,” and by knowing that your unexpected stay in the Canadian wilderness is likely to be short if you carry out the appropriate actions.

“I know what to do” – research has shown that survival knowledge and skills, when employed, are key elements in successful survival

stories. The ability to react to a new situation, or to cope with the important little things, will create a sense of confidence and security. Just the knowledge of the priorities of survival, and how to recognize and fight fear will set you up for survival. Hundreds of survival stories indicate that there is rarely unlimited time in which to make decisions. Many decisions will have to be made using the information and resources available at that moment – you will have to make the best plan and act on it immediately.

"I am a survivor!" – curiosity, humour, imagination, willpower and common sense are the attributes of a survivor. Make the best of each situation, and adapt positively to new crisis when they may occur.

"I can take care of myself" – knowing what to do, how to do it, and having the confidence to act on these strengths will keep you from being a burden on other team members, as well as allowing you to be an active leader. Positive acts and attitudes are contagious.

"I will get out of this" – remember that people are likely looking for you – even if you fear that no one will find you. Modern search and rescue makes use of various techniques and technologies – it is almost at the point that you would have to consciously hide to avoid being found. The one thing that you need to do to make the rescue work is to stay alive and conscious. A lost person who can signal or respond to signals will be found sooner.

"[Human] capacities have never been measured: nor are we to judge what we can do by any precedents, so little has been tried. What people say you cannot do, you try and find you can." H.D. Thoreau

TEAM BEHAVIOUR IN SURVIVAL

Organization – chances of surviving depend largely on a team's ability to organize themselves for activity, and cooperate in setting and achieving goals. An emergency does not weld a crew together; rather, the more difficult and disordered the situation, the greater are the disorganized team's problems. This is particularly true in the face of common danger, when fear can result in panic rather than concentration. A team that is well trained and prepared will cope better with the prolonged stress of a survival situation.

Communication between members, sharing tasks, and planning concurrent activities are keys to organization. In well-organized teams, people excel in the job that most closely fits their personal qualifications – assign tasks conscientiously.

Morale – high team morale has many advantages:

a. individuals feel strengthened and protected since they realize that their survival depends on others whom they trust;
b. the team can meet failure with greater persistency; and,
c. the team can formulate goals to help each other face the future.

High morale must come from internal cohesiveness and not merely through external pressures. Under certain conditions, moods and attitudes become wildly contagious. Panic often may be prevented by conscious, well-planned organization and leadership on the basis of delegated or shared responsibility, combined with faith in the group and realization of the need for cooperation.

Reaction speed – is key to a team's success. By reacting immediately to new hazards, a team will stay occupied (defence against boredom), and will be better able to cope with new problems later. Staying on top of the situation will allow the team to plan, set goals, and assist survival – a team that is constantly overwhelmed will have no time to plan.

EMERGENCY SIGNALS

As stated before, modern search and rescue relies on sound and visual signals to find lost people. The more you do, the quicker the rescue will be. Stay close by your signals so you can employ them when required. Always set out signals, even if you fear that no one is looking.

You can use anything to form a triangle (make three points) to use as a distress signal. Use rocks, a big pile of logs and brush, or anything as long as it is in an open area that can be seen from above. Fire is another form of communicating. During the day, use a smoky fire burning green brush, at night use a bright fire using dry softwood branches. Triangles and signals in sets of three are international distress signals.

A whistle or the mirror from a compass are good signals that your should have. Do as many other things as you can think of to try to communicate or signal someone. Unroll toilet paper or lay out your extra clothing to make a signal, you have to be creative and keep your mind busy.

GROUND TO AIR SIGNALS

X Require doctor	**I I** Require medical supplies	**F** Require food and water
V Unable to proceed, require help	↑ Going this direction	□ Need map and compass

Letters should be at least 10m long and visible from the air (open riverbanks, clearings, frozen lake, etc). If making a signal in winter you must make sure that you stomp down the snow so a shadow appears to form the signals.

EO 403.22: PREDICT A CHANGE IN WEATHER

INTRODUCTION

Weather in Canada has a massive range throughout the year. Temperatures can change as much as 20°C in one day, winds can develop or drop off, it can rain, snow, hail, or drizzle, and all changes can happen suddenly. Knowing the weather influences your choice in clothing, routes, plans, etc. One thing to remember is that weather is a combination of systems, and as such, it gives warnings of change in advance of a new system. Your ability to notice and interpret these warnings will give you an advantage in making decisions for your team's safety and well-being.

You do not need to be a meteorologist to make some weather predictions, but you do need to have some knowledge of what is going on up there. As a leader in the outdoors, you need to be aware of

upcoming changes in weather in order to make appropriate decisions concerning training. While equipment is available to assist weather forecasting, the average outdoor leader should *at least* be able to recognize changes based on observation.

CANADIAN WEATHER SYSTEMS

Over Canada, warm air (tropical) masses usually move north from the Caribbean and the U.S., and cold air (polar) masses move south from the arctic. Air masses can form over both the land and the ocean. Air masses generally move from west to east. Weather associated with a polar air mass is apt to change abruptly as the cool air warms rapidly over land, while weather associated with tropical air masses will likely remain constant for a while as the air is already warm.

Air pressure – the force air exerts on an object – is effected by air temperature. Cold air is heavier, and therefore creates areas of high pressure as more air is close to the ground. Warm air creates low pressure because warm air rises and reduces the pressure on the ground. These areas are called **pressure systems**. *Usually*, low pressure systems are associated with fair weather, and high pressure with foul weather. Both systems can bring precipitation. In Canada high pressure systems create winds that rotate in a clockwise direction, and low pressure systems create winds that rotate counter-clockwise. As these systems move over you, you may notice the wind shift directions.

High and low systems can not occupy the same space, they displace each other. The line where two air masses meet is called a **front**. There are three types of fronts: warm, cold and occluded.

Warm fronts – are more stable than cold, which makes the weather less severe, but more long lasting. As warm air meets cold, it raises over the cold, and the moisture in the air condenses, both from the rise in elevation and from contact with the cold air, creating clouds and possibly precipitation. Warm fronts move between 15-30km/h, and the air is moist with low ceilings and poor visibility, but there may be no appreciable precipitation. Warm fronts can be forecast up to two days in advance by a consistent sequence of cloud formations – cirrus, cirrostratus, altostratus, and then nimbostratus.

Cold fronts – are more unstable than warm, and consequently very active. As cold air comes in contact with a warm air mass, it forces itself underneath, pushing the warm air up where the moisture condenses into clouds and possibly precipitation. Weather conditions are commonly more severe, although shorter in duration than those associated with a warm front. Cold fronts move between 40-80km/h, and form to the north or west. Cold fronts can arrive with little warning, altostratus clouds usually preceding nimbostratus and cumulonimbus.

Occluded fronts – occurs when one air mass is caught between two others. In most cases, the weather will include precipitation, often heavy – altostratus clouds preceding cumulonimbus.

TYPES OF CLOUD FORMATIONS

Cirrus – are detached clouds in the form of white, delicate filaments or white (or mostly white) patches or narrow bands. These clouds have a fibrous (hair-like) appearance, or a silky sheen, or both. Cirrus clouds leave milky white swirls and curls etched across the sky.



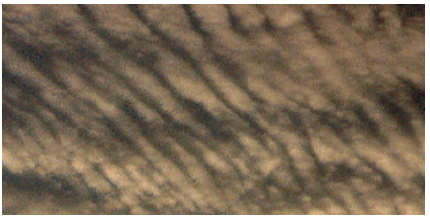
Cirrus

Cumulus – Often referred to as heap clouds, cumulus clouds are typified by heaped or fluffy formations.



Cumulus

Cirrocumulus – High-level heap clouds. Very often seen combined with cirrus clouds. Cirrocumulus clouds indicate a condition of unstable air and may lead to precipitation before long.



Cirrocumulus

Fair-weather cumulus – Low-level cumulus clouds that often form in the late morning or early afternoon. Clouds are not very dense, are white in colour, and are well separated from one another. These clouds form when the air mass is stable and being warmed.



Fair weather cumulus

Cumulus congestus – High-level cumulus cloud formed by massive uplifting of heated air within a very unstable air mass. Its top is still bumpy and forming. If clouds form in the west there is a likelihood of gusty winds and showers in 5 to 10 hr.



Cumulus congestus

Altocumulus -medium-level, fleecy or puffy clouds, similar to dense cirrostratus, but without any telltale halo. When viewed in the early morning, altocumulus usually indicates thunderstorms or precipitation within twenty-four hours (often that afternoon).



Altocumulus

Cumulonimbus – Often massive cumulus with a broad base ranging from 3,000 feet upward to 16,000 feet, even 65,000 feet is not unusual. Top is fuzzy or anvil shaped. Heavy downpours, coupled with hail, lightning, and thunder, are common.



Cumulonimbus

Stratus – means layered, essentially formless with no real defining base or top. Fog is a type of stratus cloud that lies close to the ground and is caused when the earth's surface cools. This cooling effectively lowers the air temperature, resulting in condensation.



Stratus

Cirrostratus – High-level veil-like cloud formations composed of ice crystals and often spreading out over a very large surface area. Halos around the sun are very often observed in cirrostratus clouds, when observed decreasing in size, it indicates a lowering of the cloud ceiling and possible precipitation within forty-eight hours.



Cirrostratus

Altostratus – Medium-level clouds that are flat, and dark grey in colour. A darkening of the cloud cover indicates possible precipitation within forty-eight hours.



Altostratus

Nimbostratus – Low-level, dark and thick clouds, often without any real defining shape. Their ragged edges, known as scud, produce steady precipitation.



Nimbostratus

FORECASTING FROM CLOUDS

When the weather is going to change for the worse you will notice several general cloud activities. Clouds, regardless of their formation, will thicken (darken), increase in number or join together, form layers or stacks, and/or lower in elevation. Clouds that form banks in the west, with winds from the south forecast storms. Other signs of change for the worse are:

a. clouds that are moving in all directions, or contrary to the ground wind;
b. altostratus clouds that darken and lower mean precipitation over the next 24 hours;
c. there is a halo around the moon;
d. altocumulus clouds moving quickly across the sky, or forming with turrets in the morning are signs of storms within 12 hours; and,
e. cumulus clouds forming in the morning and stacking in the afternoon, or moving from the south or south-west, expect rain or storms that day.

When the weather is going to change for the better you will notice the cloud cover lifting, becoming lighter, and small patches of blue sky developing. If cumulus clouds form in the afternoon, or float alone without stacking, expect fair weather for 24 hours. Stratocumulus clouds drifting with the prevailing wind remaining scattered indicates 24 hours of the current weather. Other indicators of stable weather:

a. the condensation trail (‘contrail’) left by high altitude aircraft disperses quickly; and,
b. morning fog burns off before noon.

FORECASTING FROM WINDS

Changing for the worse:

a. winds from the east increasing in speed usually indicate a coming storm;
b. winds from the south increasing in speed; or,
c. winds shift in a counter-clockwise direction (e.g. north wind shifting to west then south).

Changing for the better:

a. winds from the north-west usually indicate clearing, or continued clear weather for 24 hours;

b. winds from the south or north decrease; and,
c. winds change in a clockwise direction (e.g. south to west).

KEEPING TRACK

Forecasting weather is an imperfect art – even for those equipped with the latest technology. Make notes in your journal in the morning, at noon and at night about the weather. You can use these notes to track changes and to help make forecasts. Do not let this replace researching weather patterns for your area, listening to professional weather forecasts, or common sense.

EO 403.23: JUDGE A DISTANCE

While electronic range finders and GPS receivers have made the average person better able to measure distance accurately in the field, the ability to judge distances without electronic aids remains an important skill. From assisting navigation, to communicating information about features or people, to the routine of setting up a biv site, the skill of judging distance is of daily value. At short distances it is easy – but longer distances require a great deal of practice. There are several methods to assist you in judging a distance: the *unit of measure, appearance, halving, bracketing, and unit average methods.*

UNIT OF MEASURE METHOD

This method relies on you observing and remembering a measured distance and then estimating other distances using your "unit of measure." The most common unit of measure is 100m. Your local soccer pitch or football field is 100m long. Stand at one end and familiarize yourself with the distance. This distance then becomes your imaginary metre stick as you place it between yourself and the object you are judging a distance to. By saying to yourself, "That object is 3 football fields away" – you have judged it to be 300m. This method can only be used when there is nothing obstructing your field of vision.

THE APPEARANCE METHOD

Another way to judge the distance to an object is to study what it looks like compared to its surroundings; this is called the appearance method. It takes a lot of practice to become good at it. One way of practising is to

again go back to a place where you have accurately measured 100m. Place people, kit, vehicles, etc. at the 100m mark so you can memorize what they look like at that distance. Do the same with the targets at 200m, 300m, 500m or more. When standing at a distance from such objects as a house, a vehicle or a person, you can learn to judge distance from the appearance of the object, i.e. from its size and the amount of detail you can distinguish.

By comparing the appearance of a person's body at 100 m, 200 m, 300 m, and 500 m you will find as the distance increases the body appears smaller and other features gradually fade out. The following may be used as a guide to judge the distance between you and another person:

a. 200 m – all parts of the body are distinct;
b. 300 m- outline of the face becomes blurred;
c. 400 m – outline of the body remains clear but the face is difficult to distinguish; and,
d. 500 m – the body appears to taper from the shoulders and movement of limbs can be observed.

There are several optical distracters that make the appearance method challenging.

An object will appear closer than it is when:

a. the object is in bright light or the sun is shining from behind you;
b. the colour of the object contrasts sharply with the colour of the background;
c. you are looking over water, snow or a uniform surface;
d. you are in a clear atmosphere found at high altitudes;
e. there is dead ground (dead ground is that terrain between you and the object which you cannot observe because of an obstruction, e.g. ridge, hill, trees, etc.); and,
f. it is larger than other things around it.

An object will appear further away than it really is when:

a. there is poor light or fog or the sun is in your eyes;
b. only a small part of the object can be seen;
c. you are looking down a street or tree-lined road;
d. the object tends to blend with the background;
e. the object is smaller than other things around it; and,
f. you are lying down.

THE HALVING METHOD

The first two methods are great for distances under 500m, but when the distance is greater, they become more difficult. By breaking the total distance in half (and even breaking that half into quarters) you may be able to employ the unit of measure, or appearance methods to judge the smaller distance. Once you have judged the fraction of the total distance (1/2, 1/4, etc.) just do the math.

THE BRACKETING METHOD

This method is a very rough estimating tool. Say to yourself, "That object is at least X metres away, but it is not Y metres." Take the average of your two estimates, for example if "X" is 600 m and "Y" is 1000 m, your distance is 800 m. This is definitely the fastest method to use.

THE UNIT AVERAGE METHOD

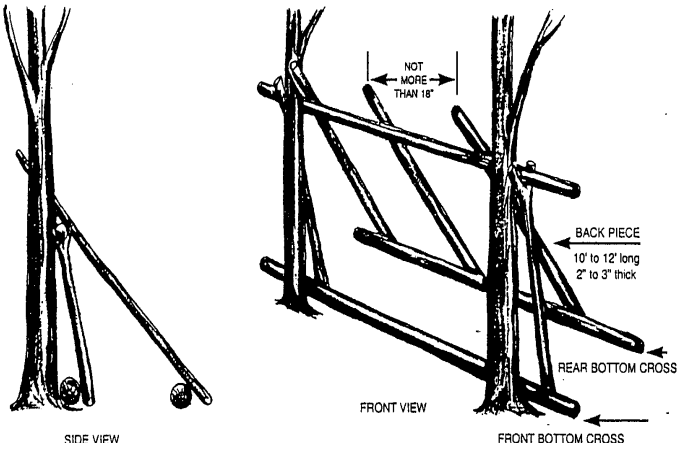
When you are uncertain of the distance to an object, get several of your teammates to judge the distance using their choice of the previous methods. Calculate the average of all estimates. This method takes the longest, but quite often a group of skilled cadets will be very accurate.

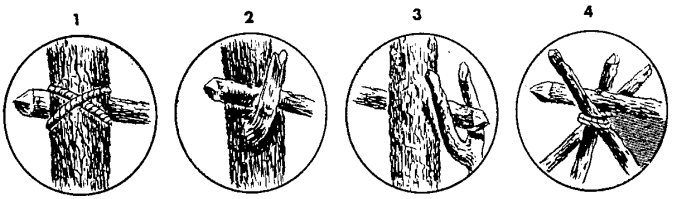
EO 403.24: CONSTRUCT AN IMPROVISED SHELTER

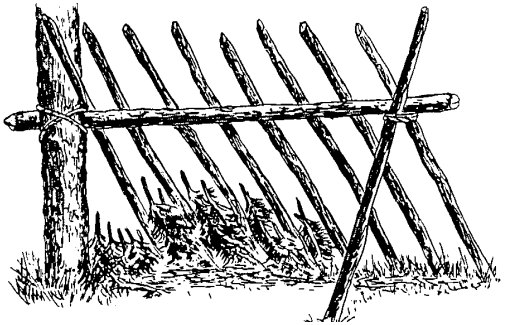
Types of improvised shelters:

a. lean-to;
b. lopped tree shelter;
c. natural shelters;
d. ground sheet shelters (EO 403.07); and,
e. snow shelters.

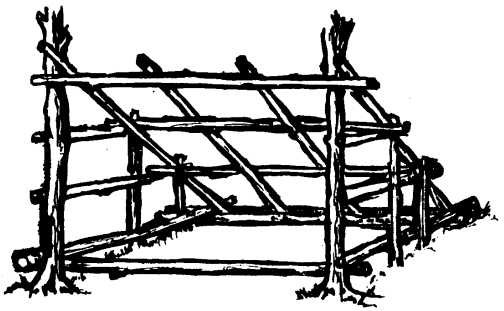
LEAN-TO

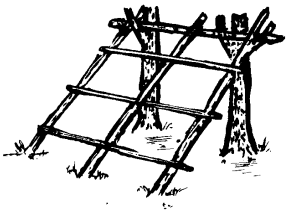

NOT
MORE
THAN 18"
BACK PIECE
10' to 12' long
2" to 3" thick
REAR BOTTOM CROSS
FRONT VIEW
FRONT BOTTOM CROSS
SIDE VIEW

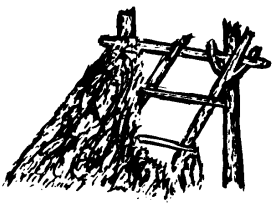




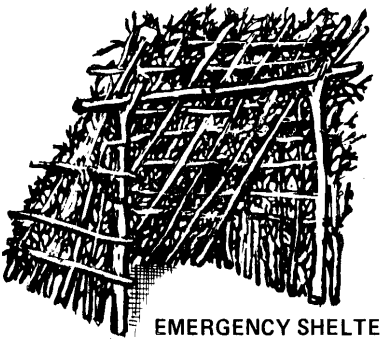
LEAN TO FRAME
Charpente d'un abri en appentis







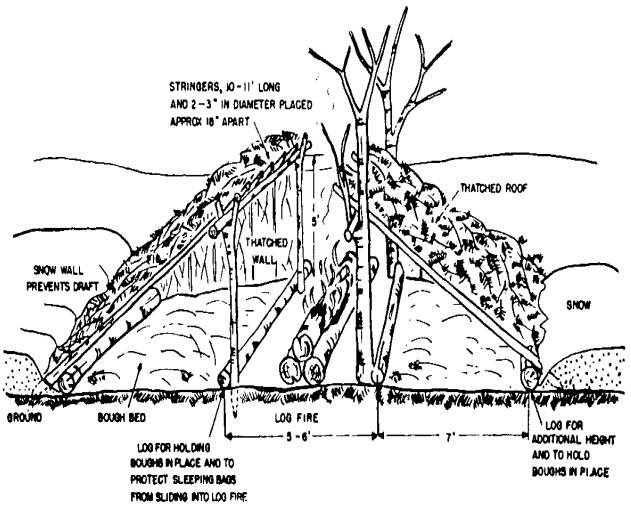
PARTLY THATCHED
Appentis partiellement ouvert



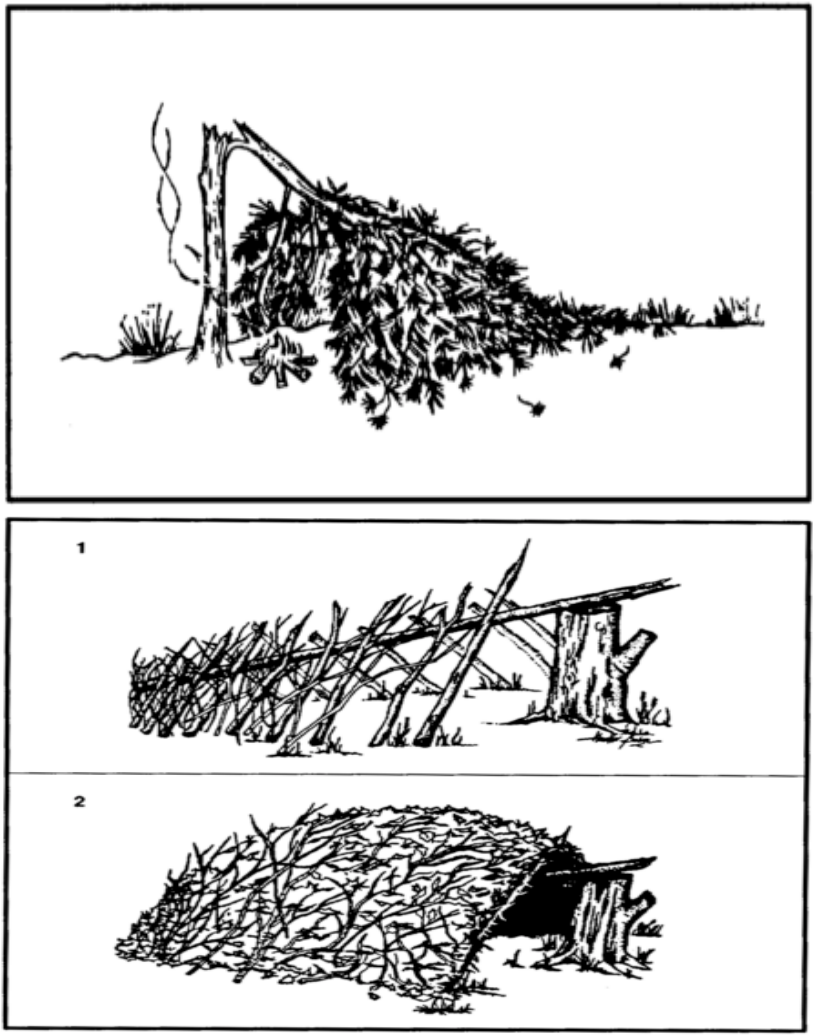
EMERGENCY SHELTER
Abri d'urgence



OVERLAP BOUGHS FROM BOTTOM TO TOP
Insérer les branches à partir du bas ver le haut



LOPPED TREE



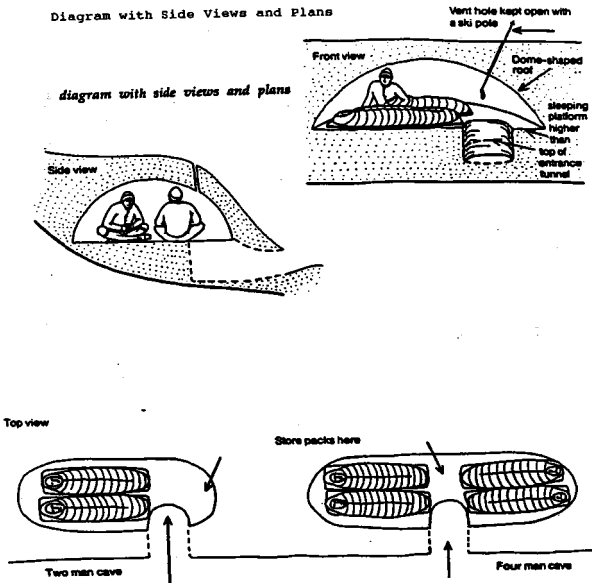
When you select a tree, ensure that it is in a safe position, or reinforce its position with a lashing. Never select a tree that would severely injure you if it fell on you when you were sleeping.

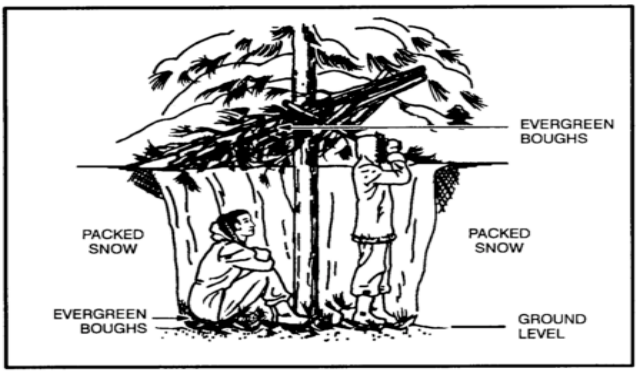
SNOW SHELTERS

Snow shelters – snow is an excellent insulator. There are several types of shelters you can build, depending on the condition and depth of the snow.

Snow cave – is made from a large snowdrift, or deep snow. Dig into the snow bank or drift, away from the wind so drifting snow will not block the entrance. Dig a small tunnel (less than 1 metre across) directly into the side of the drift about two feet in. Then dig upwards and to the left and right of the door. Create a space high enough to sit up in.

Quinzhees – simple and made out of any kind of snow. Clear out the area of snow where you want your shelter – 3-4metres. Then put it all back into the center packing it down as you go. You need a well packed pile 1.5 to 2 metres high. Gather several sticks to stick into the top and sides about one foot in; this will be your guide as you are scraping out the inside so you don't go too close to the walls and the roof.





Igloos – a traditional snow house. They require a certain degree of skill, teamwork, time, and snow tools to build; and they must have very well packed cold (Arctic) snow.

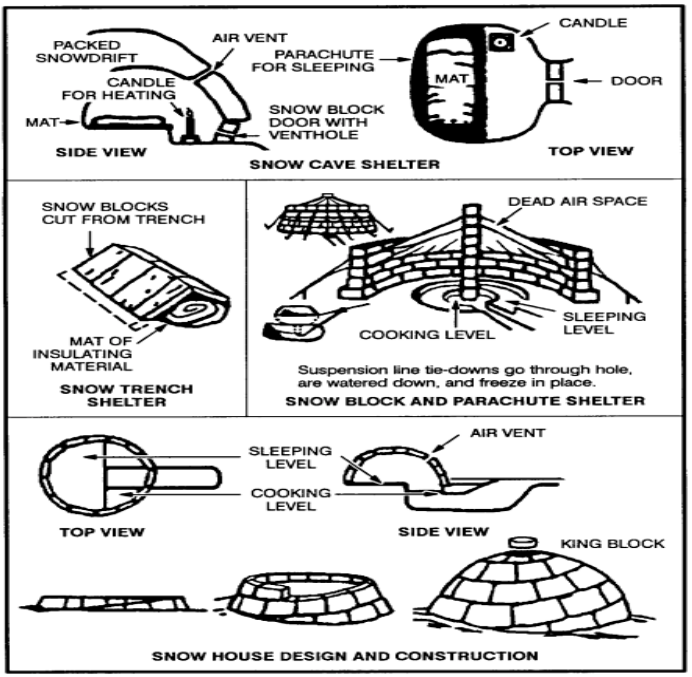


Figure 15-4. Snow houses.

Tips for snow shelters:

a. digging a snow shelter will make you very wet! Always have dry clothing set aside for after, and ensure you take breaks for hydration and rest (to keep from overheating and soaking your clothes from the inside) when required;
b. snow shelters take a long time to build – a quinzhee may take as much as 4 hours to make, with only enough room for 3-4 people;
c. tunnel entrance should lead into the lowest level of the chamber, this is because cold air is heavy and will not rise, so outside air will not spread.;
d. the inside ceiling should be high enough to provide comfortable sitting space;
e. sleeping and sitting benches should be higher than highest point of the tunnel entrance – this prevents the warm air from slipping out through the door opening;
f. all sleeping and sitting platforms require insulation – sleeping pads, or evergreen boughs in an emergency;
g. before entering for the night, place a burning candle or small lantern inside, the heat will cause the inner layer of snow to melt and harden – strengthening the roof. Extinguish the candle/lantern before sleeping;
h. the roof must be arched so that the melting drops of water will follow the curved sides and become refrozen;
i. plan for a door flap, or place your pack in the doorway after you enter;
j. the roof should be at least one foot thick. Never put any weight on the roof; and,
k. make two ventilation holes about 10cm across, one near the door and the second will be one in the roof. Do not let them close as you may suffocate.

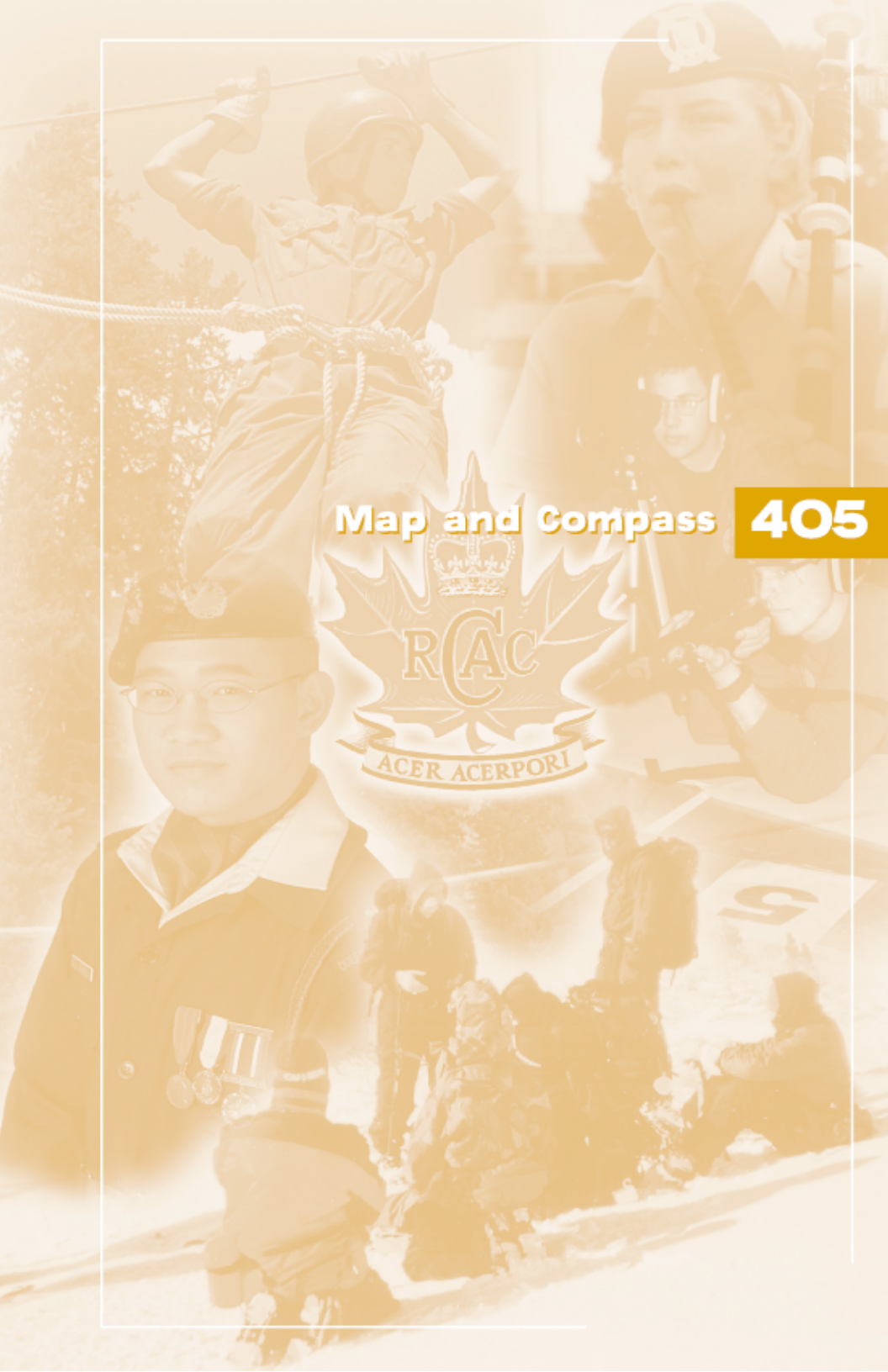
"Only those who have had the experience can know what a sense of physical and spiritual excitement comes to those who turn their face away from [civilization and] towards the unknown."

Arthur Lower

NOTES: _____

Volenti, non fit injuria – *[Those] who knowingly enter in a risk situation cannot complain about difficulties.*

NOTES:


Map and Compass
405
RCAC
ACER ACERPORI

PO 405 MAP AND COMPASS

EO	DESCRIPTION	PAGE
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02	State the meaning conventional signs found on a topographical map.	5-06
03	Locate a specific point on a map using a four and Six figure grid references and constructing a romer.	5-14
04	Orient a map by inspection.	5-20
05	Measuring distance between two points on a topographical map	5-24
06	Contour lines	5-26
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08	Identify the points on a compass	5-35
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INTRODUCTION

Map using is one of the most practical outdoor skills, and also one of the most challenging. It is not just a skill of reading information from a map, it's a combination of decision making skills, intuitive thought, and mathematical ability. When you read this chapter, you should have a map with you to act as a reference.



EO 405.01: INRODUCTION TO MAP USING

TYPES OF MAPS

A map is a picture of the ground. It can be based on air photos, satellite imagery, and/or a first hand reconnaissance of the ground. Most maps are produced in order to illustrate certain information, or to serve a purpose for clients – urban planning, travel, education, sovereignty, etc.

Examples of types of maps are:

a. political maps show countries, provinces or other political borders – e.g. globes and atlases;
b. street and road maps are designed to assist commuters and tourists;
c. a statistical map shows statistical information like the production levels of crops or minerals across a country;
d. digital maps, often used with Global Positioning Systems (GPS);
e. relief maps are built to show a three dimensional view of the mapped area;
f. outline maps show only borders, rivers, coastlines, etc.;
g. topographical maps show water, vegetation, structural and contour details, for wilderness travel, land use planning, military uses, etc.;
h. orienteering maps are used for the sport of orienteering, and they show great amounts of detail of a small area; and,
i. air photo maps are the actual pictures used to create all these maps.

MAP MAKING

Before airplanes allowed us to take pictures from above, maps were drawn by someone actually travelling over the terrain and drawing by hand. Much of Canada was mapped this way by European explorers like Champlain, Tyrrell, MacKenzie and Thompson. When you think of how difficult it would be to draw a picture of the land, without ever having looked down on it, you can appreciate how much effort, and how exacting the work of mapmaking must have been.

With aerial photography, mapmaking became much easier – but it still required a great deal of work by the mapmaker. Two air photos of the same area of ground, taken one after the other by the plane, laid side by side and examined through a stereoscope, gave the mapmaker a three

dimensional view of the ground. For the first time, maps could show exact positions as well as depth and elevation. Some groundwork might still be still required to confirm details or to see through heavy vegetation. Satellite imagery and scanning, and digital mapping allows the map making process to be sped up.

Maps are only up-to-date on the day the photo or image was taken. From the day they are made, they start to become more and more outdated – much like computers. Trees get cut down, brush grows over a clearing, roads get built, railways get torn up, buildings are erected, mines filled in. Even a map of a popular area may not be updated for 5 or more years. Check the date of your map to give you perspective on how much could have changed since the map was made.

MAP SCALE

Modern maps share one thing in common, they are all drawn to scale – meaning they are an exact representations of the area which they illustrate. The scale of a map is an expression of the ratio between one unit on the map and the distance it covers, in the same units, on the real ground. For example, a 1:50 000 scale map illustrates an area where one cm on the map represents 50 000 cm (500m) on the ground. The 1:50 000 map covers an area of about 1000 square kilometres. This makes it an excellent size for expeditions. A 1:250 000 scale map covers the same area of land as sixteen 1:50 000 maps.

CARE OF MAPS

Paper maps are expensive and easily damaged. You must take precautions to protect your map from water, wind and dirt. Even maps made from durable plastic-impregnated papers can be fragile. Your map will lead you into the wilderness, and with care it will show you the way back out.

Ways to protect your map:

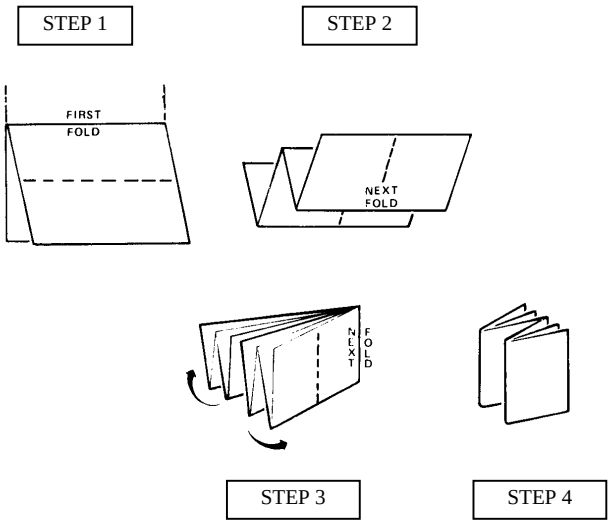
a. place your map in a clear plastic bag, or permanently laminate it;
b. fold it properly and refold it only along the original fold lines to view other parts;
c. if it gets wet, dry it on a flat, clean surface;
d. do not open it fully in a strong wind;

e. use only pencil to mark your map and erase all markings gently – maps protected by plastic can be marked using grease pencils or erasable markers; and,
f. store maps in a dry place, rolled, folded or laid flat.

FOLDING A MAP

Step 1 – lay map face up, fold map in half by brining the top of the map sheet down to the bottom of the map sheet;
Step 2 – Fold the top half of the map sheet up into half again, then turn map over and fold bottom half to match the top half;
Step 3 – Fold the ends of the map into half from left to right; and,
Step 4 – Fold each of the open ends back into half again so that the map name and index to adjacent map sheet appears on the outside.

Note – The map should now open like an accordion in the shape of an M.



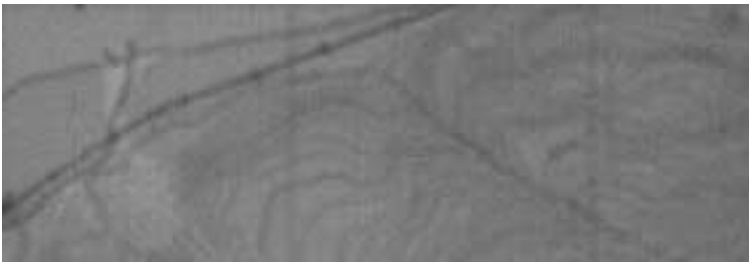
TOPOGRAPHICAL MAPS

The most common map for travel in the wilderness is a topographical map ("topo" map). These maps show a relatively small area of land and usually come in scales from 1:25 000 to 1:250 000. A topographical map illustrates water features (hydrography), vegetation, elevation and depression (hypsography), wetlands, urban development, transportation and communication routes (roads, railways, telephone lines, etc.), structures, natural features and place names. 1:25 000 to 1:50 000 maps are a good size for wilderness navigation on foot or by canoe.

"Polychrome" maps (maps produced in colour) use up to 8 colours printed on white paper. In remote regions, "monochrome" (black and white) maps are made, but they still show all the details that a polychrome map would.

1:50 000 or 1:250 000 scale topo maps are produced of all areas of Canada by the federal government through Natural Resources Canada. The information is stored in the National Topographical Data Base as part of the National Topographical System (NTS). The mapping information is based on the North American Datum of 1983 (NAD 83). The United States, Mexico, Denmark (Greenland) and Canada all follow the same standards in mapmaking for North America. The agreement in 1983 – hence the name "NAD 83," replaced a previous system agreed to in 1927 (NAD 27). Maps made using NAD 83 are slightly different than NAD 27 maps. Most NTS maps made since 1989 use NAD 83.

Orienteering maps are also topographical maps, but they follow a different set of standards than NTS maps.



EO 405.02: STATE THE MEANING CONVENTIONAL SIGNS FOUND ON A TOPOGRAPHICAL MAP

INTRODUCTION

In mapmaking, symbols and colours are used to represent all the information. Colours can show area features like lakes, forests, and cleared fields; or can be used to illustrate information about a symbol – e.g. marsh symbols are printed in blue, and orchard symbols are in green. Symbols are used to illustrate different objects or features, both those that appear at points (e.g. buildings), and those that are linear (e.g. rivers). Symbols and colours used on a map are commonly referred to as "conventional signs." Not every detail on the ground shows up as a conventional sign – for example, a swamp would have to be over 100m long to appear on a 1:50 000 map. Each conventional sign has strict guidelines for its use.

CONVENTIONAL SIGNS

Polychrome maps use up to eight colours to communicate information about the symbol or a defined area:

a. **red** – is used for paved roads and highway numbers – it is also used to shade in areas of urban development;
b. **orange** – is used for unpaved roads;
c. **brown** – is used for contour lines, contour elevations, spot elevations, sand, cliffs, and other geological features;
d. **blue** – is used for water or permanent ice features (like rivers, lakes, swamps and icefields), names of water features, and the grid lines;
e. **green** – is used for vegetation features like woods, orchards and vineyards;
f. **grey** – is used for the legend of conventional signs on the back of the map;
g. **black** – is used for cultural features (buildings, railways, transmission lines, etc.), toponymy (place names), some symbols and precise elevations; and,
h. **purple** – is used for updates that are made over top of the original map information.

NTS CONVENTIONAL SIGNS

Like all methods of communication, conventional signs are updated and changed with time. Most conventional signs from old maps will look similar to their new forms. All new NTS topo maps have a full legend of signs on the back to help you remember. While the complete list of conventional signs is very long, there are some you should memorize illustrated on the following pages.

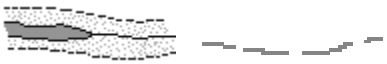
WATER



River, with direction of flow (blue)



Falls; rapids



Dry river bed; intermittent stream

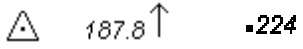


Locks; dams (large; small)

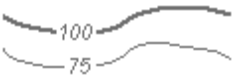


Marsh; swamp

TERRAIN



Horizontal control point; Benchmark with elevation; Precise elevation



Contours; index (dark) and intermediate



Depression controus



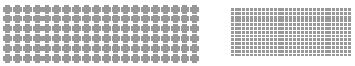
Cliff; case



Quarry; Pingo

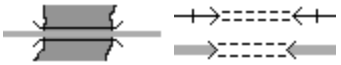


Sand; Esker



Orchard; vineyard

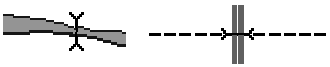
TRANSPORTATION, HUMAN ACTIVITY, MISCELLANEOUS



Bridge; tunnel



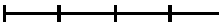
Causeway



Footbridges



Gate on road



Railway, single track



Railway, multiple track, with station

Vehicle track or winter road



Road – loose surface (orange) 2 lane; 1 lane



Road – hard surface (red) 2+ lanes; 2 lane

Trail or portage



Airfield; Heliport



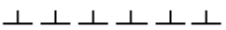
Airfield, position approximate



Seaplane anchorage; Seaplane base



Elevator; Oil or natural gas facility



Telephone line



Landmark object (with height) – tower, chimney; silo



Cemetery



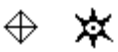
School; Fire stationl Police station



Church; Non-Christian place of worship; Shrine



Buildings; Campsite; Picnic area



Historic site or point of interest; navigation light

MAKE YOUR OWN MAP

To understand what it takes to make a map, try making one of your classroom, cadet corps building, home or school. Try to keep all the details in scale. Make your own conventional signs for features on your map. Try to communicate information about what each feature is made of and how high it is. Create a legend of your conventional signs.

MAP AND COMPASS TERMS

The following terms are used in map reading:

a. **Basin.** A basin is an area of fairly level ground surrounded or nearly surrounded by hills or the area drained by a river and its tributaries;
b. **Benchmark.** A permanent point used for surveying;
c. **Contour line.** A contour line is a line on the map joining points of equal elevation above mean sea level. Contour lines are drawn on maps to give you a three dimensional view of the ground;
d. **Crest.** A crest is the highest part of a hill or mountain range. A crest is the line on a range of hills or mountains from which the ground slopes down in opposite directions;
e. **Escarpment.** An escarpment is the steep hillside formed by a sudden drop in the general ground level, usually from a plateau;
f. **Gorge.** A gorge is a narrow stream passage between steep rocky hills;
g. **Grid**. A grid is a system of lines forming squares drawn on a map as a basis for a system of map references;
h. **Grid North.** Grid north is the direction of the vertical grid lines on a map;
i. **Knoll.** A knoll is a small knob-like hill, also called a pingo;
j. **Margin.** The border of a map, containing reference information;
k. **Mean Sea Level.** The average height of the surface of the sea for all stages of tide, used as a reference surface from which elevations are measured;
l. **Plateau.** It is an elevated region of land, usually quite long and fairly level;
m. **Plot.** To mark a location or route on a map;
n. **Ravine.** A ravine is a long, deep valley worn by a stream;
o. **Re-entrant.** A re-entrant is a valley or ravine on the side of a hill or mountain often between two spurs;

p. **Ridge.** A ridge is the line along a hill or range of hills;
q. **Saddle.** The low ridge between two peaks;
r. **Spur.** A minor feature, generally in the form of a ridge, that juts out from the side of a hill or mountain;
s. **Topography.** Surface features both natural and cultural, collectively depicted on topographic maps; and,
t. **Universal Transverse Mercatur (UTM) grid.** A square grid system based on the Transverse Mercatur projection, depicted on maps. Named after Gerardus Mercator who published an atlas in 1569 which projected the earth onto a cylinder.

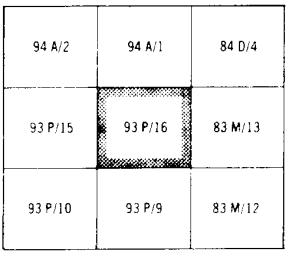
MARGINAL INFORMATION

Marginal information is found in the margin of your map. Some useful information is:

a. **Name of map sheet** – for ease of reference the name of the of the map is usually major community or district the map covers, is used (find this at the bottom centre of the margin, as well as the bottom right corner); e.g.

KAMLOOPS
BRITISH COLUMBIA

b. **Number of the map sheet and index of adjoining maps** – The centre block of the index identifies your map, plus the 8 maps around it (find this at the bottom right corner); e.g.

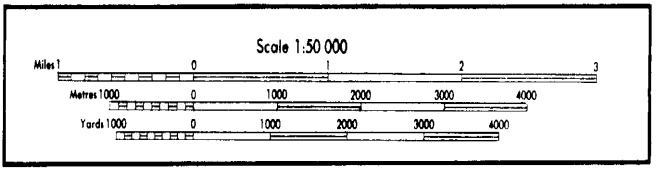


c. **Date of map data** – helps to indicate the amount of change that may have occurred since the map has been printed (find it in the copyright information in the bottom left and right corners);

d. **Map scale** – ratio scale for the map (find it under the map name, bottom centre); e.g.

Scale 1:50 000

e. **Scale Bars** – used to help measure distance on the map (find them under the map scale, bottom centre). Notice how the left end of the scale bars are divided into tenths for measuring accurate distances; e.g.



f. **Contour interval** – indicates the distance between the contour lines (find this in the bottom margin, just right of the scale bars). The contour interval could be in feet or metres – make sure you check! It also shows whether NAD 27 or NAD 83 was used as a basis for the map information; e.g.

CONTOUR INTERVAL 25 FEET Elevations in feet above Mean Sea Level North American Datum 1927 Transverse Mercator Projection

g. **Legend of conventional signs** (find this in the bottom margin, plus a more complete list on the back of the map); and,

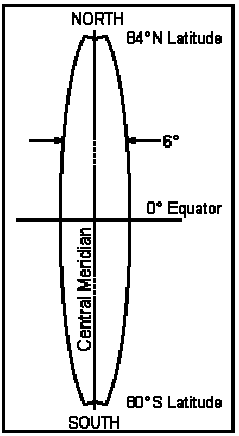
h. **Military index number for ordering this map** (find it in the top right corner).

EO 405.03: LOCATE SPECIFIC POINT ON A MAP USING A FOUR AND SIX FIGURE GRID REFERENCE AND CONSTRUCTING A ROMER

UNIVERSAL TRANSVERSE MERCATOR GRID

Because the world is round, any type of representation of its surface on a flat piece of paper will have distortions. These are relatively insignificant on maps that show only small parts of the earth, like city maps or 1:50 000 scale maps, but quite considerable for maps of countries or continents. A “map projection” is a geometrical method of reducing the amount of distortion on a flat map. In very large countries such as Canada, mapmakers divide the country into strips from north to south, called “zones,” and project each zone. One system of strip projection is the “Universal Transverse Mercator (UTM) Projection.” All National Topographical System (NTS) maps use this system.

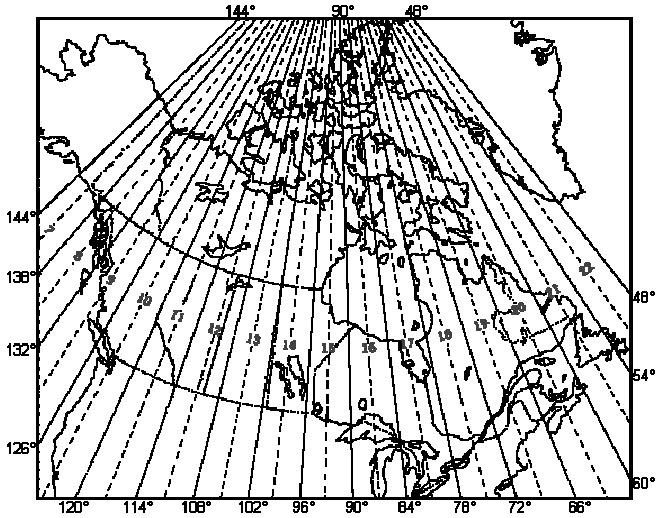
Shape of a UTM zone – 6 minutes of longitude wide



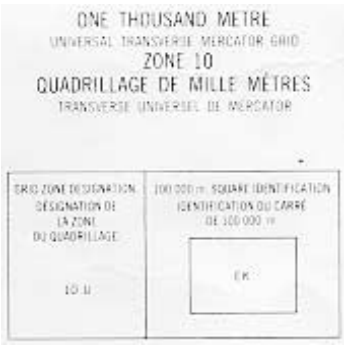
To picture a UTM zone, imagine the earth as an orange. All the geographical features are drawn on the peel. Take a knife and, after slicing off small circles at each pole, cut the peel into many narrow strips from pole to pole. Then take the strip of peel and press it flat against a smooth surface. Even though the details in the middle of the peel might become a little distorted, the strip is narrow enough for the details to remain accurate enough for regular map users.

For the UTM Projection, the earth’s surface has been divided into 60 zones. Sixteen of these zones, numbered 7 through 22, cover Canada

from west to east. Shown below are the numbered zones with their centre meridian marked with a dotted line



Each zone is divided into sections, and these sections are published as 1:250 000 scale maps by the NTS. Each 1:250 000 scale map can then be divided into smaller areas, like 1:50 000 scale maps. Find the zone number of your map in the right margin.



GRID REFERENCE SYSTEMS

When a mapmaker has projected a zone, and divided it into sections, a rectangular grid is laid over top of the projection. These grid lines are shown in blue on a topo map. The grid lines are exactly parallel to each other. The vertical grid lines are printed parallel to the meridian of the zone, and the horizontal grid lines are parallel to the equator.

The largest of the grids are squares that are 100km x 100km. Each of these 100km squares is identified by a letter which is stated after the UTM zone number. In the example above, the Grid Zone Designation is “10 U.” Each large square is further divided into smaller squares of 10km, and then again into 1km squares. It is these 1km x 1km (1000m x 1000m) squares that you see on a 1:50 000 scale topo map.

EASTINGS

Each grid line in the 1000m grid is numbered. The vertical lines are numbered from an imaginary line 500 000 metres west of the zone’s centre meridian. Each zone then starts at zero in the west and each 1000m line is numbered going towards the east. In the bottom and top margins you will find each vertical grid line’s number, usually a two-digit number at the top and bottom ends of the line. In the bottom left corner you can see the full number represented with the letter E printed behind it. This tells you how many metres east of the start point you are. Because these lines are numbered from west towards the east, they’re called “**Eastings.”**

NORTHINGS

Each horizontal line is also numbered, this time starting with zero at the equator. In the left and right margin you will find the two-digit numbers at the ends of each horizontal line. In the bottom left you will find the full number of metres from the equator with the letter N printed behind it. Note that the most southerly part of Canada 4 620 000 metres from the equator. Because these lines are numbered from the equator towards the north, they are called “**Northings.”**

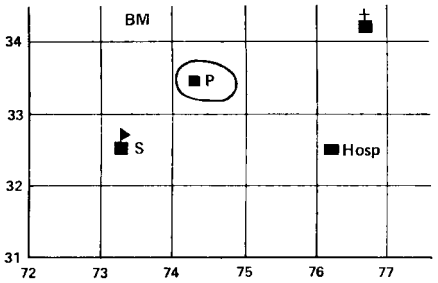
MILITARY GRID REFERENCE SYSTEM

The military traditionally identifies grid lines by stating the two-digit short form of the grid line numbers. Because these two-digit numbers repeat over a large area (every 100km), the military has established a letter code for each 100km x 100km square. The military grid codes is found in the right margin underneath the UTM Zone number. In the example above, the military "100 000m Square Identification" is "EK." This code also appears on your map face.

FOUR-FIGURE GRID REFERENCES

The grid system on a map allows us to identify locations and communicate them to other people with an internationally accepted system. When you identify a location using the grid system it is called using a "grid reference."

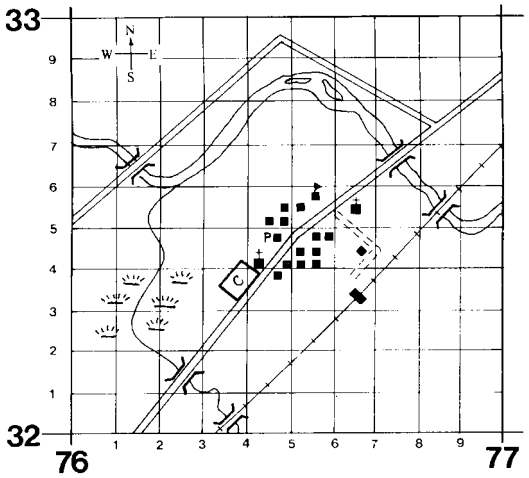
Military grid references use the two-digit grid line numbers to identify specific grid squares. For centuries, mathematicians have always stated the X coordinate (vertical) before the Y coordinate (horizontal), so map users have adopted that procedure**. Eastings are stated before Northings**. Every 1000m grid square is identified by listing the numbers of the grid lines that intersect at its bottom left corner.



For example: The post office circled is located in the grid square identified as 7433. The hospital is at grid reference 7632. Remember: a four-figure grid reference refers to the entire grid square. The easiest way to remember to list the eastings then northings is to say, "In the door, then up the stairs."

SIX-FIGURE GRID REFERENCES

In wilderness navigation we often need to be more accurate with a grid reference for a location than a 1000m x 1000m square. In the illustration below you'll notice that the grid square has more than one bridge, so communicating which bridge you are going to meet at would be impossible using a four-figure grid reference.



By creating an imaginary grid inside a grid square, we can use the same principles of the grid reference to make a more accurate statement of location. Each small easting and northing is numbered 1 to 9, from west to east and from south to north respectively. Then each smaller (100m x 100m) square can be identified listing all eastings, then northings. For example: Grid reference 761326 is given, the easting is 761 or 76 and 1/10, and the northing is 326 or 32 and 6/10. Locate your grid square at 7632 and then go in 1 and up 6. .

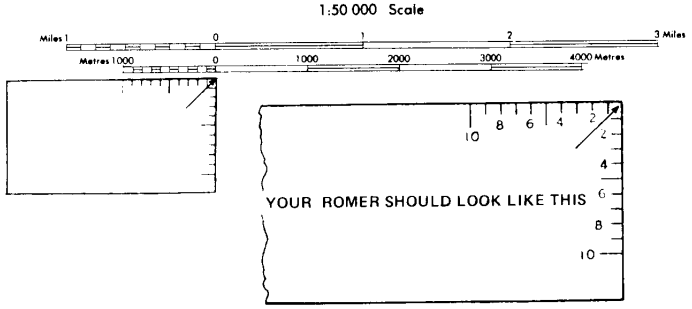
a. There is a church at grid reference 764324; and,
b. There is a T-junction in the road at 768327

Remember that a six figure grid reference describes a square 100m x 100m – in other words, it is accurate to about 100m.

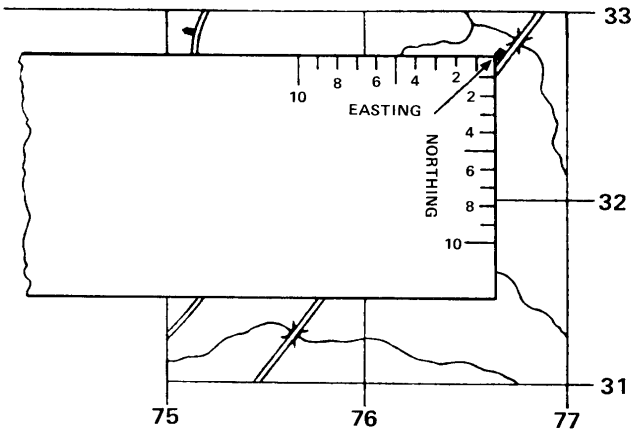
This imaginary grid inside a square can be estimated, or you can measure accurately using a tool called a "romer."

CONSTRUCTION AND USE OF A ROMER

A romer is a device used for measuring a point within a grid square rather than estimating. The left side of the metres scale bar is divided into100m segments. Use a blank corner of a piece of paper, place it along the scale, mark off the 100m segments and then number them, starting with zero at the point. Number both sides up to 10.



To use, place the corner of your romer on the grid square and move in the number of tenths and up the number of tenths. The grid reference for the building in the example below is 766327. Note: always round down.



EO 405.04: ORIENT A MAP BY INSPECTION

ORIENTING A MAP BY INSPECTION

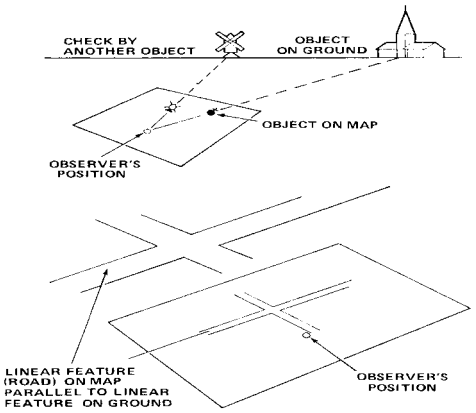
Orienting your map is one of the most important skills in map using. With an oriented map you can navigate across all but the most difficult terrain. Follow these steps to orient your map:

Step 1 – Identify your approximate location on the map.

Step 2 – Identify 2 or 3 prominent landmarks on the ground and find them on the map. Try to use landmarks in different directions.

Step 3 – Rotate your map until all identified objects on the map line up with the direction in which objects are located on the ground. If you are near a straight stretch of road, orient your map by using the road. Line up the road on the map parallel with the road on the ground.

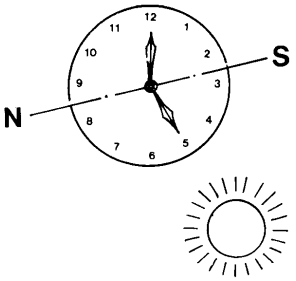
Step 4 – Check all around you to verify that the features to your front are in front of your position on the map, and so on. The top of your map now points north.



ORIENTING WITHOUT LANDMARKS

There may be occasions where you can not see any distinct features to orient from, so the best you can do is orient the top of your map to north by using the sun or wind.

To find north using the sun, simply remember that the sun rises in the east and sets in the west. For morning and evening the sun can be a very helpful navigational aid. You can also find north using the sun and the time of day. Using an analogue watch, or drawing a clock on the ground, point the hour hand at the sun. Half-way between the hour hand and the 12 (using the shortest distance) is due south. This technique works for Standard time, you may have to adjust your watch if you are in Daylight Savings time.



Also remember that the prevailing wind in Canada is from the west so stop and feel for the wind direction. Evergreen trees growing in the open will often have much thinner branches on the west side.

PACING

Pacing is a very important skill in map using. You need to know how many of your paces fit into 100m. Pace along the length of a football field counting every left foot – an average adult will pace about 60-70 paces in 100m. Once you know your pace for 100m, you can keep track of how far you have travelled on a route recording 100m sections. Keep in mind that going up or down slopes, or crossing obstacles, will affect your pace. Try counting every third step on slopes.

Factors affecting pacing:

a. walking uphill – you take smaller paces;
b. walking downhill – you take larger paces;
c. type of terrain – mud, thick bush will shorten paces;
d. weather – heavy rain or snow will shorten your pace;
e. fatigue – if tired your pace will shorten; and,
f. equipment – will shorten your pace in relation to the amount of equipment you are carrying.

CHOOSING A ROUTE

Choosing the best route to take from one point to another depends on factors like distance, terrain, visibility and the amount of time you have. There are some strategies that you can use to help make navigating cross country easier:

a. plot your start and finish points. Estimate the distance between the two by comparing the distance on the map to the same on the bar scale. Another way of estimating is to measure the width of your thumb on the bar scale, then see how many "thumbs" long your route is. The average person walks 3-4 km/hr across smooth open ground;
b. "Handrails" are obvious linear features on the ground that you can follow towards your target. Handrails make the trip easier by doing the navigation for you. They might be creeks, trails, power lines, fences or even slopes of ridges and hills. You might be able to string several handrails together to lead you to your target;
c. "Collecting features" are landmarks along your route that you can check off as you pass. They allow you to concentrate on only a few navigation way-points instead of trying to keep track of everything you pass. Break down a long route into smaller sections between collecting features; and,
d. a "Catching feature" is the stop sign that tells you you have gone too far. It should be a large and obvious feature across your route that you will not be able to miss like a creek or a road. Always pick out a catching feature.

Sometimes the target point that you're looking for is small or hard to recognize. Do not try to rush straight through the woods to find a tiny target. When you plan your route, look for something large and easy to find close to your target. This is called using an "Attack point." Your route is effectively broken down into one long, easy route from the

start to your attack point, and a short, difficult route from attack point to your target.

Choosing a route is the key to successful map using – do not limit yourself to a straight line! Look for handrails that will help you. Consider the amount of wooded, swampy or hilly terrain between you and your target. Often it is quicker to take a long, easy route around tough terrain than it is to plough your way through it. Time spent planning a route is never wasted. Never plan a route through hazardous terrain like cliffs, steep slopes, open water, or areas marked restricted on your map.

NAVIGATING WITH AN ORIENTED MAP

Once you have your map oriented, keep it oriented. If you change direction, change the direction of the map in your hand to compensate. Carry the map in your non-dominant hand – i.e. if you are left handed, carry the map in your right hand. This will leave your strong hand free for other tasks like balancing or slapping mosquitoes. Always place the thumb of your map hand on the last place that you knew where you were. It could be the start point or a landmark as you pass it. This will help you find your position quicker and more confidently when you look at your map. Do not try to navigate by staring at your map, keep your head up and look around. Once you have planned your route, assigned your attack point, found any useful handrails, noted collecting and catching features, only refer to the map to remind yourself or look forward to the next feature or section. You do not have to stop moving to look at your map – continue along your route, but at a careful pace. Be sure to refer to your map on a regular basis – at least once a minute.

Pace your route – count your paces and use your pace count to help keep track of your position, either between collecting features or from start to finish if the route is short. If you pace out the distance and you have not reached your target, allow yourself a few more then reassess your position. Pacing and time are two good ways of reminding you not to wander too far when you are having trouble finding your target.

To navigate in open areas, orient your map, then look out in the direction of your planned route. Look for your first collecting feature and head off. As you approach the first collecting feature, look at your map and find your next point, placing your thumb on your location. Follow your planned route checking off collecting features, counting

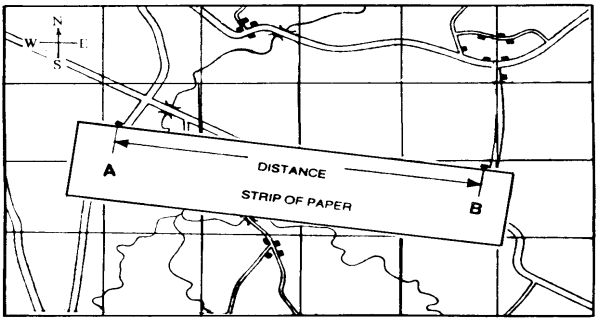
paces, keeping track of elapsed time, and watching for your attack point or your catching feature.

EO 405.05: MEASURING DISTANCE BETWEEN TWO POINTS ON A TOPOGRAPHICAL MAP

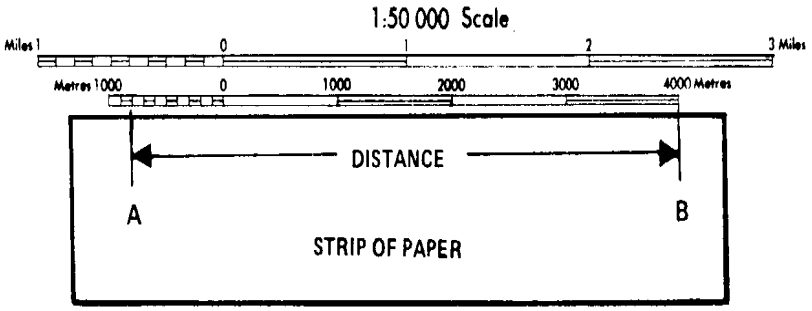
There are two ways to describe the distance between feature; point to point, or along a route. Point to point measures the straight line between points. Measuring along a route might be an obvious path, road, or along your planned route.

To measure a straight line between two points:

a. take a piece of paper and place the upper edge on the map so that it touches the two points;
b. mark the points on your paper;
c. clearly indicate you start and finish points;

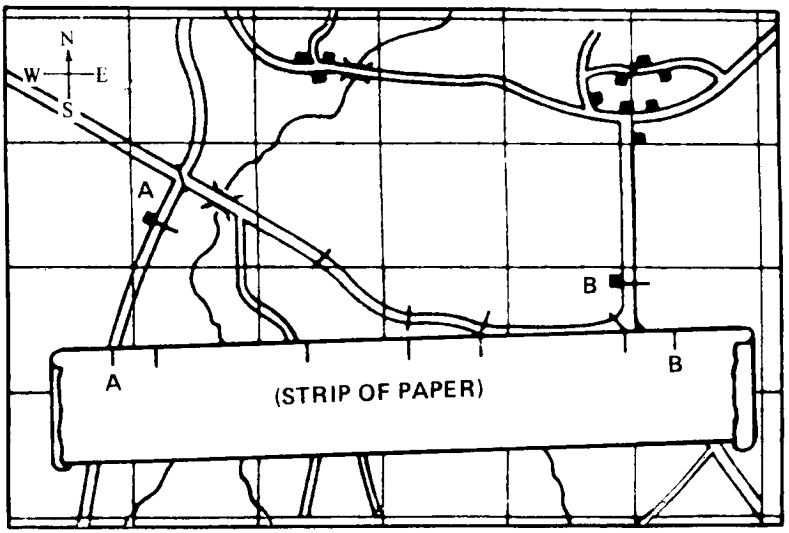


d. now place the paper on your scale bars; and,
e. calculate the distance – in the example below it is 4800m.



To measure along a route (road, trail, stream, etc) between two points:

a. lay a piece of paper along the first section and mark the paper;
b. now pivot the paper until it lays along the second section, mark your piece of paper at the end of the section;
c. repeat this process until you have reached point B; and,
d. compare the distance marked on the paper to the bar scale and calculate the distance.



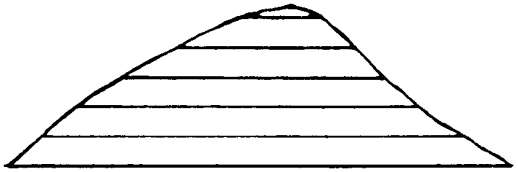
EO 405.06: CONTOUR LINES



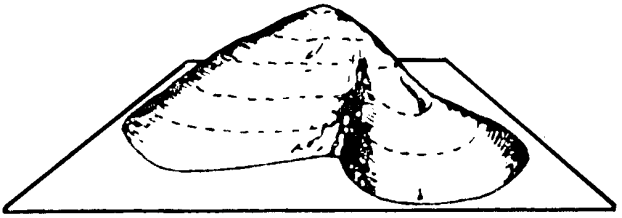
The shape of the ground is the most permanent natural feature on your map, and on the ground. While trees get cut down and roads built, etc, the hills, valleys, cliffs and ridges remain pretty much unchanged. Your ability to read contour lines is a great aid to navigation, as well as a major influence on your choice of routes.

Mapmakers created contour lines as a two dimensional method of representing three dimensions. Elevation, or 'relief,' on a map is illustrated by joining all points with the same elevation to create contour lines. Now, instead of covering the entire map with contour lines, specific elevation values are selected with intervals between – e.g. every 10m. The value of the difference between the elevations of contour lines is labelled as the 'contour interval' and is printed in the bottom margin of the map. Not all maps have the same contour interval.

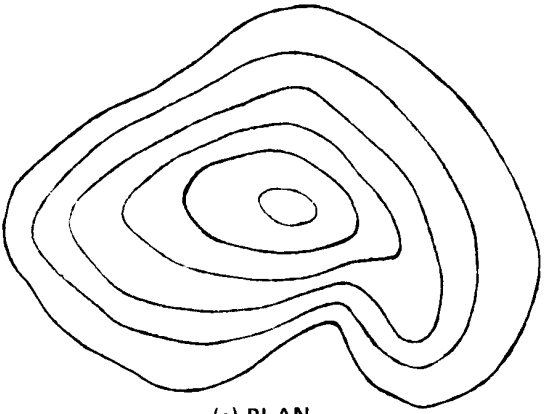
The contour lines are printed in light brown (see EO 405.02), with every fifth line darker – called "index" contour lines. Elevation above Mean Sea Level (M.S.L.) is indicated on some lines, with the numbers (in metres or feet) always printed facing uphill.



(a) ELEVATION



(b) PERSPECTIVE

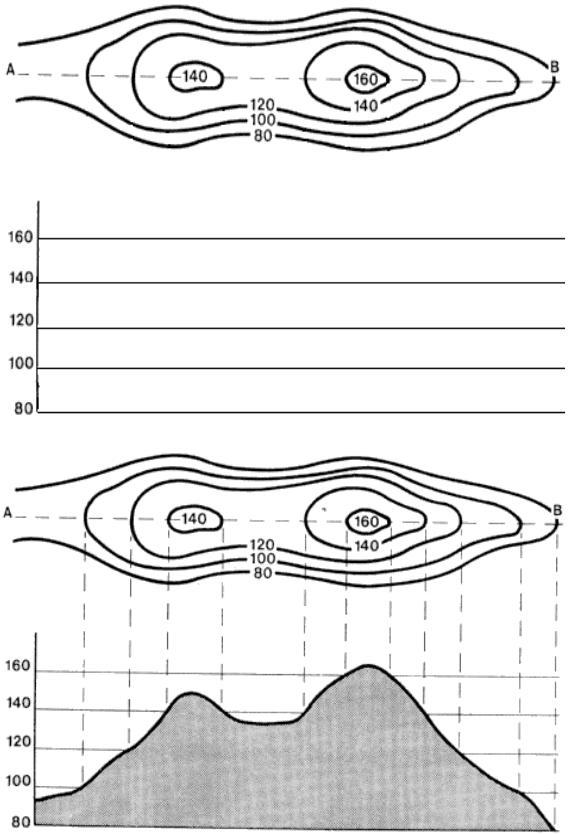


(c) PLAN

Remember that any change in elevation that is less that the contour interval will not necessarily be shown by contour lines on the map. On a 1:50 000 scale map with a 10m contour interval some hills as tall as a two-storey house may not be depicted. In some cases, ‘spot elevations’ will give you an exact elevation.

CONTOUR SECTION

To get an idea of what the topography looks like from the side you can draw a quick section. You can plot out parts of your route this way to get an idea of the rise and fall – how easy or difficult a specific section of your route might be. A graph on a piece of paper slid just below the section you want to draw is numbered with the elevations from smallest to largest.

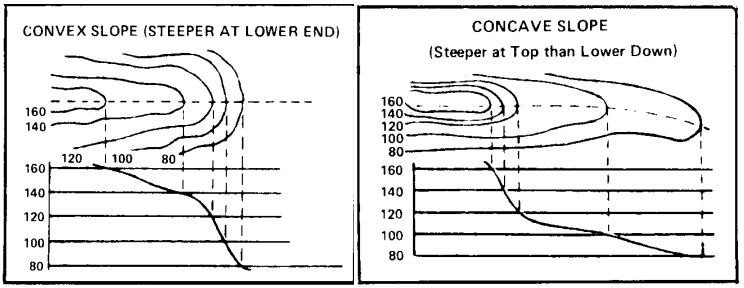


In the example above, a route between A and B in a straight line would involve about 50m of climb with slopes getting close to 45°. You can also do a section to determine whether one point on the route would be visible from another – this is called 'intervisibility.'

SLOPES

The closer together the contour lines the steeper the slope.

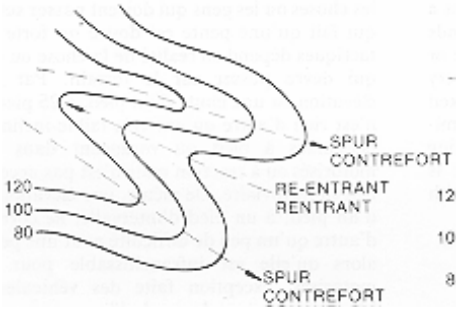
Convex slope – slope starts from the top as gentle, then becomes steeper as you go down. The middle of the slope seems to bulge outward – appearing convex.



Concave slope – slope starts steep at the top, then gradually becomes gentle. The middle of the slope seems to depress inward – appearing concave.

Uniform slope – as the name suggests, a uniform slope remains constant in its decline, whether steep or gentle.

Spurs and re-entrants



A spur is a contour feature that extends from a slope, and a re-entrant cuts back into a slope – often formed by water flow downhill.

EO 405.07: IDENTIFY PARTS OF THE COMPASS AND THEIR FUNCTIONS

INTRODUCTION

The compass is an important tool used in wilderness navigation. It is not a replacement for good map techniques, but it is a trustworthy tool to compliment and complete navigation skills. A compass user must take care to be precise in their measurements with the compass. A small error in calculation or measurement can equal a significant error in the field.

A magnetic compass is still viable as a navigation aid, even with the advent of Global Positioning System devices, because it requires no batteries, and remains reliable year after year.

HISTORY



Chinese floating compass

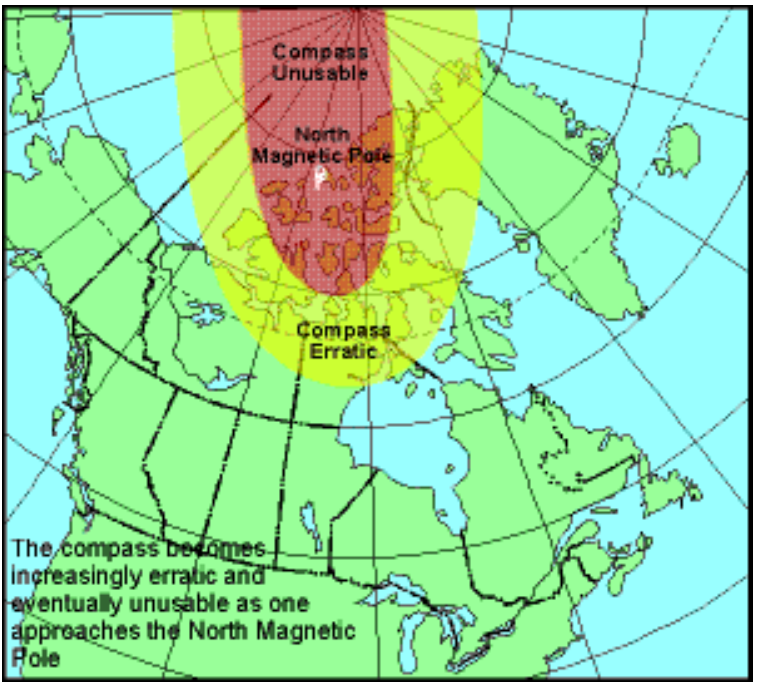
The Chinese had discovered the orientating effect of magnetite, or lodestone as early as the 4th century BC. In 101 BC, Chinese ships reached the east coast of India for the first time, possibly with help from a magnetic compass. By the 10th century, they had developed a floating compass for use at sea. Western Europeans had developed one by

HOW A COMPASS WORKS

Regardless of their intended purpose or the complexity of their construction, most compasses operate on the same basic principle. A small, elongated, permanently magnetized needle is placed on a pivot so that it may rotate freely in the horizontal plane. The Earth's magnetic field which is shaped approximately like the field around a simple bar magnet exerts forces on the compass needle, causing it to rotate until it comes to rest in the same horizontal direction as the magnetic field. Over much of the Earth, this direction is roughly true north, which accounts for the compass's importance for navigation.

The Earth has a north and a south magnetic pole. These magnetic poles correspond roughly with the actual geographical poles. The north magnetic pole is located at approximately 78.9°N latitude and 103.8°W, about 1000km from the geological north pole.

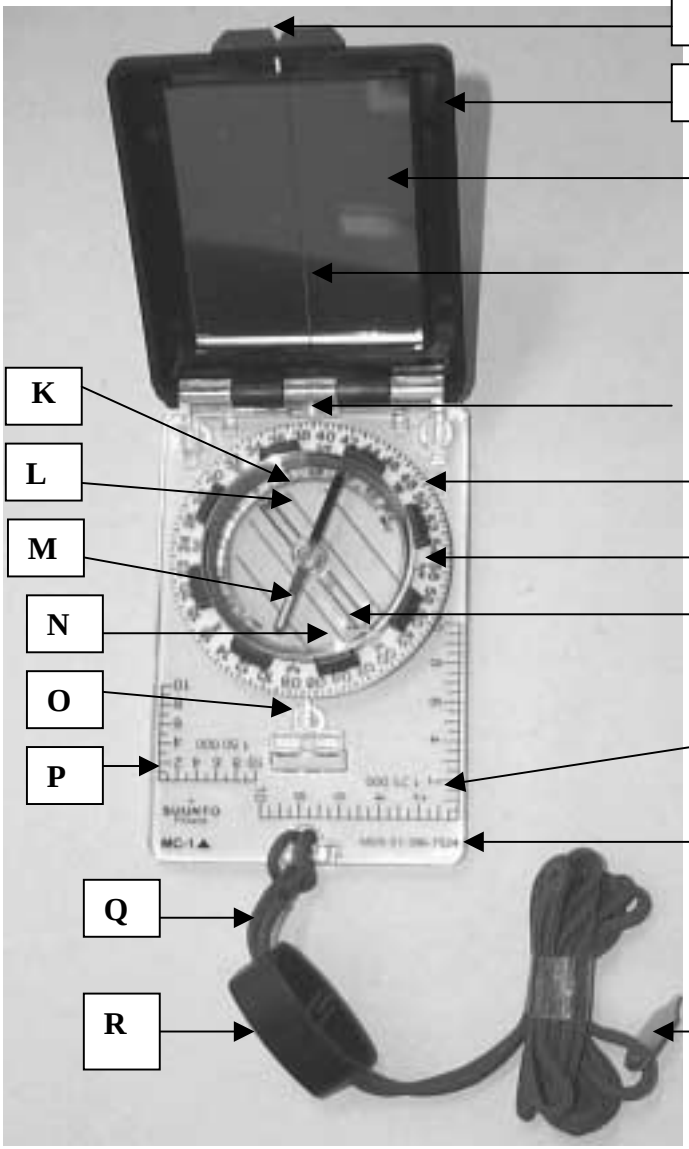
The horizontal force of the magnetic field, responsible for the direction in which a compass needle is oriented, decreases in strength as one approaches the north magnetic pole – the compass starts to behave erratically, and eventually, as the horizontal force decreases even more, the compass becomes unusable.

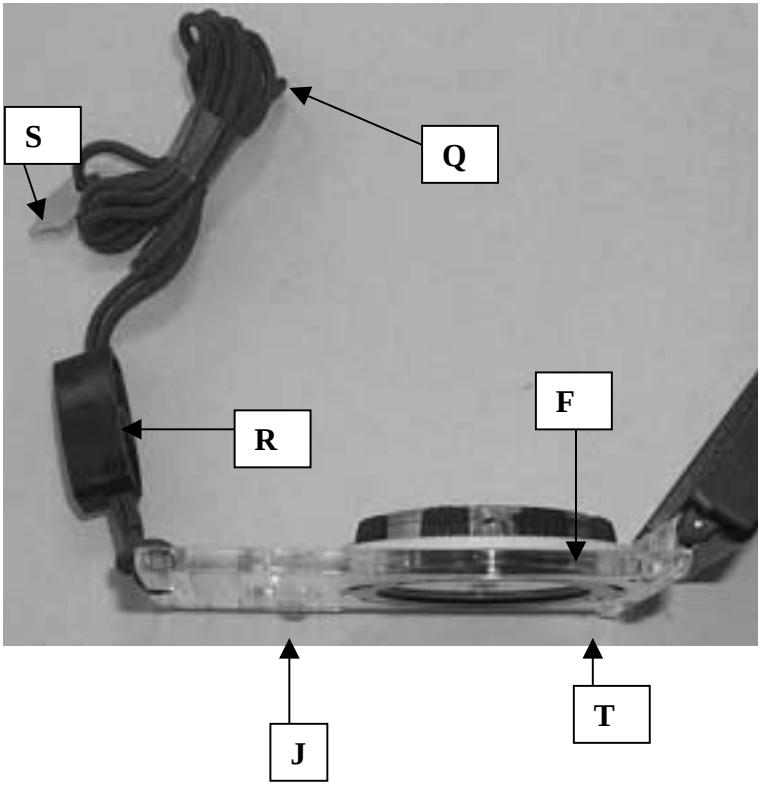


The nature of the magnetic field allows the magnetic north pole to shift geographic position about 5-10cm per year. Other natural phenomena, like earthquakes, can change the magnetic field locally.

COMPASS PARTS

LETTER	PART
A	**Sight** – used to sight your bearing.
B	**Compass cover** – folds down to protect main parts.
C	**Sighting mirror** – used to see compass dial when taking a bearing.
D	**Sighting line** – used to align the compass dial in the sighting mirror.
E	**Luminous index point** – point where bearing is read.
F	**Compass dial** – rotates to line up the compass needle when taking a bearing.
G	**Dial graduations** -in mils on edge of compass dial.
H	**Orienting arrow** – located inside the compass dial, reference that you line up with magnetic needle.
I	**1:25 000 Romer** – used to measure exact points on a map.
J	**Compass base plate** – flat clear piece of compass.
K	**Declination scale** – used to compensate for declination.
L	**Compass meridian lines** – black or red lines inside compass dial, used to line up the compass dial with grid lines on a map.
M	**Magnetic needle** – red needle that swings freely – points to magnetic North.
N	**Luminous orienting points** – on either side of the orienting arrow, used to line up magnetic needle at night.
O	**Luminous index point** – where the back bearing is read.
P	**1:50 000 Romer** – used to measure exact points on a map.
Q	**Safety cord or lanyard** – used to secure the compass.
R	**Adjustable wrist lock** – piece of plastic on the safety cord to adjust length around your wrist.
S	Screwdriver – used to adjust declination screw.
T	**Declination adjustment screw.**


A
B
C
D
K
E
L
F
M
G
N
H
O
I
P
J
Q
R
S



This compass (Suunto MC-1) has dial graduations in mils and is suitable for use anywhere in the Northern Hemisphere (except the areas described in the chart above). It requires the user to hold the compass as horizontally flat and stable as possible, to allow the needle to pivot smoothly. In the Southern Hemisphere, you would need a compass that had a pivot that allowed for a less than horizontal magnetic pull.

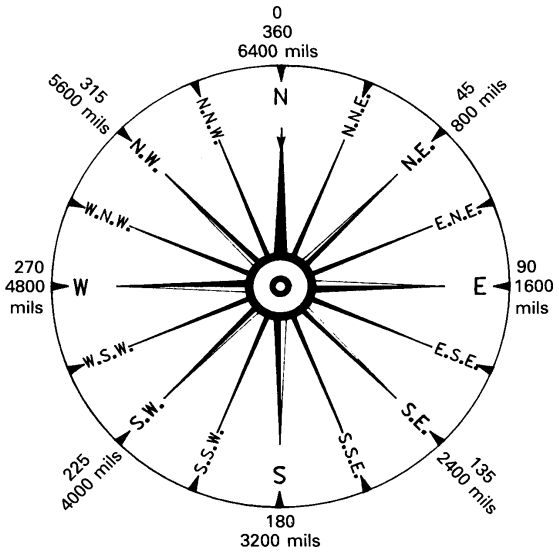
The compass dial, graduated in 50 mils segments, shows only the first two digits of a possible four – i.e. 400 mils is shown as 04, and 5800 mils as 58, and for 4100 mils you would have to count the graduations over from 4000mils. The greatest accuracy you can expect from a bearing taken with this compass is to the closest 25mils.

EO 405.08: IDENTIFY THE POINTS ON A COMPASS

CARDINAL POINTS

Early mapmakers used to draw a small 16 pointed circle on their maps, and place an "N" to point to North. These were the *16 Cardinal Points* from which the winds were thought to blow.

The four main cardinal points are North (N), East (E), South (S), and West (W). Each of these is divided in half into north-east (N.E), south-east (S.E.), south-west (S.W.) and north-west (N.W.). The circle is then again subdivided as shown below. Map users would then use these points to describe their direction of travel.



In the 1920's, it became an accepted world wide practice to indicate direction, called “bearing,” by a single number (0-360) representing degrees of a circle as measured clockwise from True North. The Canadian Forces has adopted a metric system of measuring bearings called “mils.” Degrees and mils are shown on the chart above, next to their corresponding cardinal point. O and 6400 mils are the same bearing.

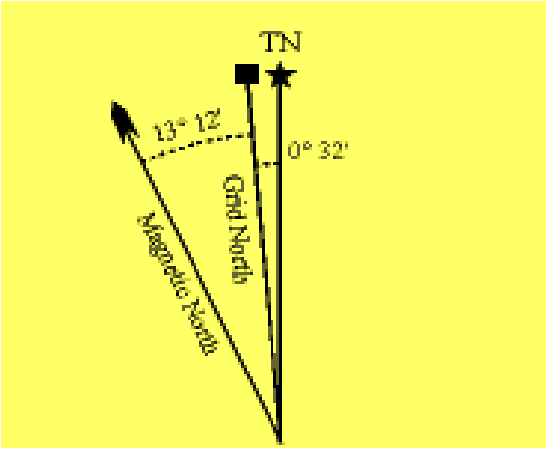
THE THREE NORTHS

We have now discussed several different definitions of north. When discussing the grid reference system we saw that *Eastings* are printed north to south, and in discussing the compass we saw that the magnetic north pole is different that the geographic north pole. This gives us three distinct references to north – the "Three Norths."

True North – the earth spins on an axis which passes through the North and South pole. The geographic north pole or True North is located at the top of the earth where the lines of longitude converge.

Grid North – is the north indicated by grid lines on a topographical map. Because *Eastings* are exactly parallel to each other, they will never converge at the north pole, therefore they are pointing slightly off true north.

Magnetic North – is where a magnetic compass needle points.



Three Norths chart from map margin.

Magnetic North is shown with an arrow (compass), Grid North with a small square (map grid), and True North with a star (*Polaris* – the North Star).

MILS AND DEGREES

The degree system of bearings shares some structure and terminology with units of time. There are 360 degrees (360°) in a circle. There are 60 minutes (**60'**) in a degree, and there are 60 seconds (**60"**) in a minute. It is common to only divide degrees into minutes, and to use decimals of minutes instead of seconds (e.g. 1.5' instead of 1'30").

Mils is a metric-like system for dividing a circle. A circle is divided into milli-radian and there are 6318 milli-radians in a circle. But 6318 is not a convenient number for simple math, so map users commonly use 6400 mils in a circle. At one km each mil is about one metre wide.

In certain calculations, or when using a compass with dial graduations in degrees, you may need to convert mils to degrees or degrees to mils. For conversion purposes, there are **18** [17.78] mils in one degree.

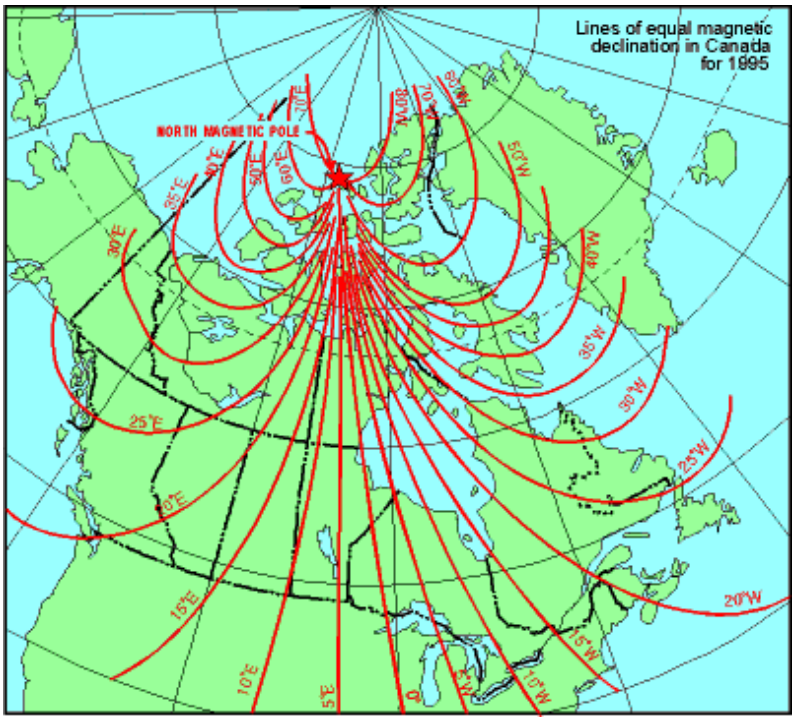
EO 405.09: MAGNETIC DECLINAISON AND ORIENT A MAP USING A COMPASS

Having an oriented map is the key to successful navigation. When poor visibility, or lack of identifiable landmarks, inhibits orienting by inspection, a quick and accurate orientation can be accomplished using your compass. The natural tendency of a magnetic compass to point north has help travelers for centuries keep their maps orientated.

However, as we know, a magnetic compass points to Magnetic North, not True North, so orienting a map accurately requires a map user to compensate for the difference.

MAGNETIC DECLINATION

'**Magnetic declination**' is the difference between true North and Magnetic North, and it is measured in degrees and minutes. Declination will change, not only depending on your geographic position, but also annually due to the shifting magnetic pole. There are only two lines in the Northern Hemisphere where the Magnetic and True Norths line up equaling a declination of 0° – one line running through central Canada and one through Russia. Declination is further described by stating whether the declination is East or West of True North.



Magnetic Reference Field Models – are created to assist mapmakers in printing accurate and up to date declination information on their maps (right margin). Since the magnetic field is constantly moving, it is not useful to just print the last known declination on a map, as a map may not be reprinted for years and the declination will change in that time. By analysing the historical data of declination, a mathematical routine called a *magnetic reference field model* is created, from which declination can be calculated. Global models are produced every five years. These constitute the series of International Geomagnetic Reference Field (IGRF) models. The Canadian Geomagnetic Reference Field (CGRF) is a model of the magnetic field over the Canadian region. It was produced using denser data over Canada than were used for the IGRF, and because the analysis was carried out over a smaller region, the CGRF can reproduce smaller spatial variations in the magnetic field than can the IGRF. The above declination chart is based on the CGRF. It is generally agreed that the IGRF achieves an overall accuracy of better than 1° in declination. The accuracy of the

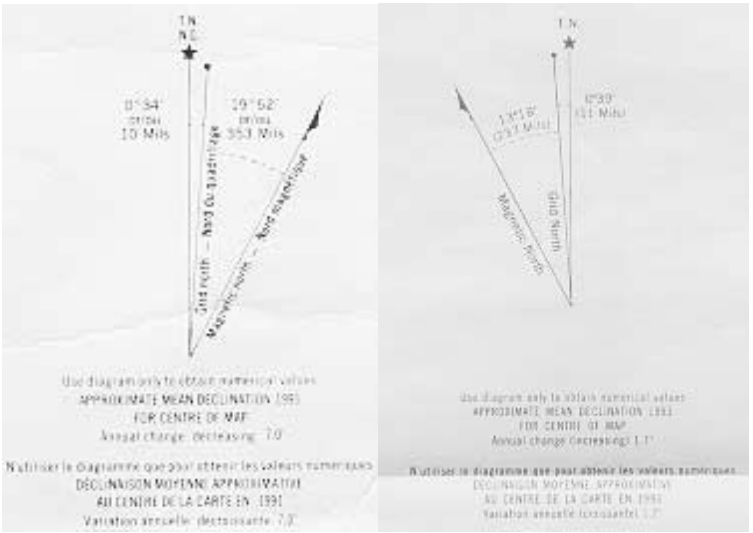
CGRF, in southern Canada, is about 0.5°. The accuracy of all models decreases in the Arctic near the North Magnetic Pole.

Using this model, mapmakers print the declination as it was determined for the year closest to the date the map was made, as well as the information about the annual change that a map user can employ to calculate reasonably accurate declination for the current year. The year that the declination information was accurate is printed along with the annual change information under the declination chart in the map margin.

The act of calculating current declination is far simpler than understanding the above theories. Trust me.

CALCULATE DECLINATION

To calculate current declination using the information provided by the declination diagram (and information printed directly underneath) is just a matter of simple math.



East declination *West declination*

To calculate declination we always use the declination stated between Magnetic North and Grid North – ignoring True North. This is because bearings taken from a map use Grid North as their point of reference.

The annual change noted under the diagram will be either ‘increasing’ (the declination is getting larger), or ‘decreasing’ (getting smaller). The total annual change will then be added or subtracted from the original declination in accordance with *increasing* or *decreasing* respectively, to get the current declination.

In the example with east declination – the declination as of 1991 was E 19°52’ and the annual change decreasing 7.0’. The math goes like this:

Current year:	2001	
Year of declination information:	-1991	
Difference of years:	10	
Difference in years:	10	
Annual Change:	x 7.0’	
Total change:	70’	**or 1°10’**

Convert to degrees and minutes when 60’ or more.

Annual change was **decreasing** so it is subtracted from the original declination:

Original declination:	E 19°52’
Total change:	-1°10’
Current declination:	**E 18°42’**

This tells us that the magnetic needle on a compass will point to the east of grid north by 18 degrees and 42 minutes, for the area depicted by this map in 2001.

This declination in mils is about 337 mils, that means that if you were to follow a compass bearing for 1 km without adjusting for declination, you would be 337 metres off the grid bearing plotted on your map. This is how important declination is in some parts of Canada.

In the example with west declination – the declination as of 1993 was W 13°18’ and the annual change increasing 1.7’. The math goes like this:

Current year:	2001
Year of declination information:	-1993
Difference of years:	8
Difference in years:	8
Annual Change:	x 1.7’
Total change:	13.6’ **or 14’**

Round up or down as required.

Annual change was **increasing** so it is added to the original declination:

Original declination:	W 13°18’
Total change:	+14’
Current declination:	**W 13°32’**

This tells us that the magnetic needle on a compass will point to the west of grid north by 13 degrees and 32 minutes, for the area depicted by this map in 2001.

It is possible to have a very small original declination and a larger total annual change, so that when you do the math the current declination actually changes from what was originally a West declination to East, or vice versa.

To find a precise declination for an area, you can try calling the local airport's Flight Control Center to get an accurate declination.

SETTING DECLINATION ON A COMPASS

The cadet compass has the advantage of a mechanical device on the back of the dial that adjusts the orienting arrow to compensate for declination. The declination scale is in degrees and graduated up to 90 degrees west and east. Ensure that you adjust this device in the correct direction. Each time you move to a new map area, you will have to recalculate declination and adjust your compass accordingly.

ORIENT YOUR MAP BY COMPASS

To orient your map with a compass:

a. calculate, then set the current declination on your compass;
b. turn the compass dial to read 00 at the luminous index point closest to the mirror;
c. lay the compass on the map with the mirror pointing North (top of the map), holding both stable and horizontal;
d. align one side of the compass base plate with an Easting; and,
e. holding the map and compass together at your front, turn yourself until the magnetic needle is directly over the orienting arrow inside the dial *("Put the red in bed.")*.

EO 405.10: MEASURE A MAGNETIC BEARING

The cadet compass is capable of measuring a bearing within 25mils. There are factors that can cause it to become less accurate:

a. compass error – each compass may have an inherent error from manufacturing. You would notice this when comparing bearings taken with one compass, with bearings taken by others. Most new and well taken care of compasses have no measurable error;
b. compass deviation – there may be either local geological abnormalities (e.g. large amount of iron content in rock), or other factors like using a compass too close to power lines, wire fence, or vehicles that will cause the magnetic needle to deviate from an accurate reading. You can lessen this chance by moving away from obvious sources of magnetic disturbance or large iron/steel objects – i.e. you will not get an accurate bearing from inside a car!
c. damage – air can infiltrate the liquid inside the compass dial (a result of extreme temperatures or damage) forming bubbles that will effect the movement of the magnetic needle, sometimes causing error;
d. not holding the compass horizontally causes the needle to try to pivot at an angle, which, with the cadet compass, will cause the needle to move less smoothly and possibly create an error; or,
e. you are too close to the magnetic north pole.

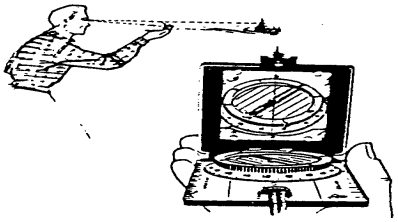
MEASURING A MAGNETIC BEARING



To take a bearing you should:

a. calculate, then set the current declination on your compass;
b. select the object on which a bearing is to be taken and face that object;
c. open the compass cover on an angle from the base plate to enable you to see the reflection of the dial in the sighting mirror;
d. hold the compass level at a full arms length and look through the compass sight, lining the sight on the object. Then, look in the sighting mirror and ensure the sighting line intersects the pivot in the centre of the dial. You can use the lanyard to assist in aligning the sight with the target object;
e. glancing into the sighting mirror, rotate the compass dial with your index finger and thumb (if you can) until the magnetic needle is over the orienting arrow (*red in bed*). Ensure the sight has remained on the object; and,
f. read the bearing on the compass dial at the luminous index point closest to the mirror.

To calculate what the bearing is from that object back to you is a simple matter of reading the back bearing from the luminous index point at the bottom of the dial, or by adding (or subtracting) 3200 mils from the original bearing.



Correct angle for cover

SET AND FOLLOW A BEARING

A bearing is a quick and efficient method of describing a route to take. The bearing, however, is usually not enough information on its own. There must also be a distance or a target object for you to look for.

To set and follow a bearing on a compass follow these steps:

a. calculate, then set the current declination on your compass;
b. turn the dial until the required mils graduation is aligned with the luminous index point closest to the mirror;
c. hold the compass level and in front of you, then turn yourself until the magnetic needle is directly over the orienting arrow;
d. you are now facing the direction of the bearing – using map reading skills you may then be able to navigate to the desired location; or
e. fold the cover at 45° (as above) , and raise the compass even with your eyes at a full arms length;
f. using the lanyard to align the sight and checking in the sighting mirror, move yourself until the magnetic needle is directly over the orienting arrow; and,
g. look through the sight and select a prominent object aligned with the sight – you can then put the compass away and walk to that object, then repeat as required until you have arrived at your desired location.

It is uncommon to plan a route between two points using only a compass bearing. Most routes will involve several map and compass skills. However, when you need to follow a bearing, great care must be taken to remain accurate in your bearing measurements, and in following that bearing.

NAVIGATING WITH A MAP AND COMPASS

Navigating using both a map and a compass is not too different from the navigation skills you have learned so far (review EO 405.05). The compass gives you that advantage of selecting more challenging routes, and navigating is terrain with fewer unique features.

Map simplification – the amount of detail on a topographical map causes many people to be overwhelmed when the time comes to make navigation decisions. By filtering the map detail down to only the most important features, or by concentrating on distinct sets of features one at a time, a navigator can make navigation a simpler process. The most common simplification is:

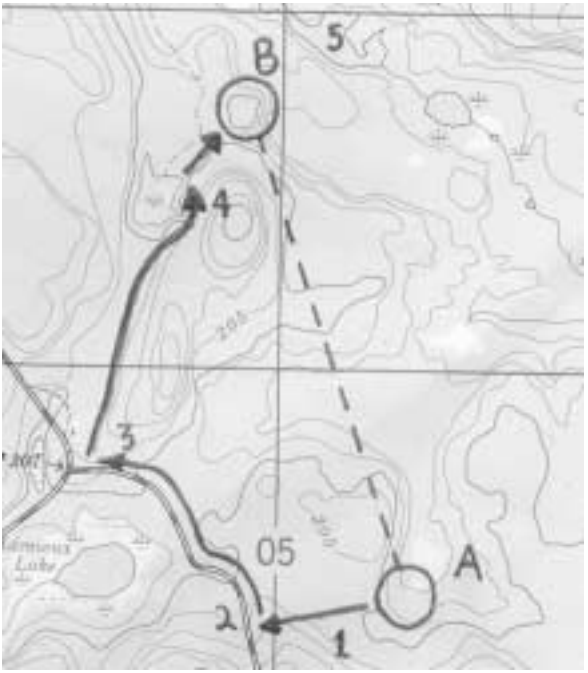
a. locate the dangers – especially in the winter you need to be aware of bodies of water;
b. locate the primary contour features – you can even highlight or circle them;
c. look for unique features – landmarks you may be able to use along your route; and,
d. establish borders – linear features that will keep you within a certain area while you navigate, including your catching feature (knowing these features exist will give you more confidence as you navigate).

Route selection – can be strategized by considering the following;

a. what are the features of your target (in orienteering it's called a 'control')? By reviewing all the features of your target in your head, you are more likely to recognize it when you get there;
b. if your target is small, or hidden in difficult terrain, plan your route first to a nearby large landmark that is easy to find (*attack point*), then navigate from that point to your target;
c. plan your route keeping in mind:
 (1) are the skills required to complete the navigation within your ability?
 (2) what are the consequences of making an error in each component of the route?
 (3) what is the distance traveled – both vertical and horizontal?
 (4) how much time should it take for each component? For the entire route? and,
 (5) difficult route choices can be solved by working from the target point backwards to the start point.

d. at what speed or 'tempo' should I attempt to navigate each component of my route? When permitted by terrain, move quickly from the start to your attack point, then slow down as you approach your target to allow for more precise navigating. Also take note of length and difficulty of the planned route so that you can pace yourself; and,
e. what will stop me if I miss? Always choose a *catching feature* on the far side of your target and keep watch for it when navigating. Avoid approaching a target from a direction where there is a poor or no catching feature.

Note: Route planning is aided by remembering: **C**ontrol, **A**ttack point, **R**oute, **T**empo, and **S**top – **CARTS.**

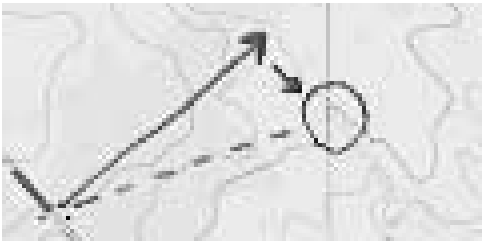


The example above shows the components of route selection. The control (B) is a hilltop, steep on the south-east side. The control is not very distinct, so a good attack point is the north-east corner of the lake (4). The route from point A to the attack point is possible cross-country (a bearing of about 6000mils for a distance of about 1000m)

but there is a good chance of the low ground between A and B being wet and dense. A safer route, as shown, is to follow a rough bearing to the road (1-2) and turn right, follow the road to the intersection (3), then proceed north following the contours, keeping the low land to your left and the hills on your right and counting paces. Once you reach the attack point (4), you can slow down and follow a bearing for the final stage, counting your paces carefully. From point A to the attack point you can move fairly quickly, and you only have a few navigating decisions to make. The small lake (5) and creek system to the north of the control acts as your catching feature. Your boundary to the west is the road at first, then from the attack point in it is the wet land and intermittent creek running north. The lack of a good boundary to the east, reinforces the described route choice.

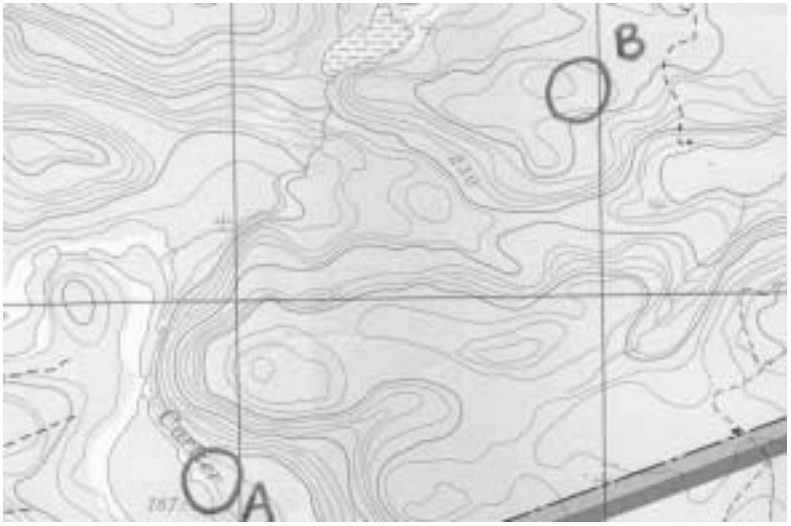
To attempt a straight line navigation, from point A to either the attack point or point B risks a couple of mistakes. If you deviate to the west of your bearing you may pass south of the attack point and lake, and there is no immediate catching feature to stop you. If you deviate to the east, you may reach the small lakes to the north-east of point B, and mistake one for the attack point. The summit of the hill south of point B is similar enough for you to mistake for point B, and may delay you while you sort it out (mistaking a similar feature for a control point is called making a ‘parallel error’).

Aiming off – is a useful compass technique. No one can follow a bearing in a perfectly straight line. When you are planning a route to take you to a distinct location on a linear feature (on a road, creek, contour feature, etc.) you should always ‘aim off’ to one side. That way, when you arrive at the feature, you will know for certain which way you need to turn to arrive at your destination. If you did not aim off, you may have few clues as to your location when you arrived at the linear feature.



Confidence – As you navigate, your level of confidence will fluctuate with success or challenge. When your confidence drops, so will your effectiveness as a navigator. Stay attuned to the 'alarm bells' that go off in your head when your confidence starts to drop. When you first notice that you are doubting either your location, your map or compass, or the person who gave you the original directions or instructions – take the time to go through the steps of orienting your map, finding your location and reasserting your confidence. Letting the situation worsen will create wasted effort, poor decision making and/or danger.

Select your route from A to B in the picture below.

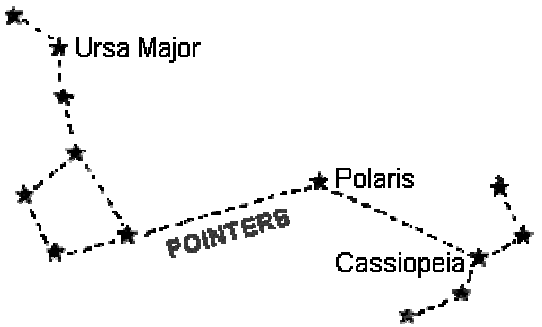


NAVIGATING AT NIGHT

Safety is your primary concern in night navigation. When possible, reconnoitre the route in the day to learn of inherent danger. As a minimum, do a thorough map study. When marching in a group, keep members closer together and employ a single file formation. Place a responsible person at the rear to keep other members from falling out. Plan for more stops during the route, and closely monitor the health and welfare of your team members.

When travelling at night it maybe desirable to enlist the aid of a team member to act as a pointer – instead of choosing a landmark to navigate to. The person on the point moves ahead and acts as the landmark directed by the navigator to move right or left to keep them in line with the bearing. When placed, march to them and repeat the procedure. Remember that at night, distance traveled will feel greater than it actually is – share the job of pacing to as many team members as possible.

The “North Star” or “Polaris” has long been used for navigation at night in the Northern Hemisphere. It does not change positions in the sky, resting on a bearing close to True North.



Polaris is centred between Ursa Major (“The Big Dipper”) and Cassiopeia, and is the brightest star between these two constellations. Ursa Major and Cassiopeia rotate around Polaris, and both pass below the horizon during the year. Remember – all other stars move in the sky (as much as 300 mils in an hour), you can use them as navigation landmarks for short periods of time only (15 minutes).

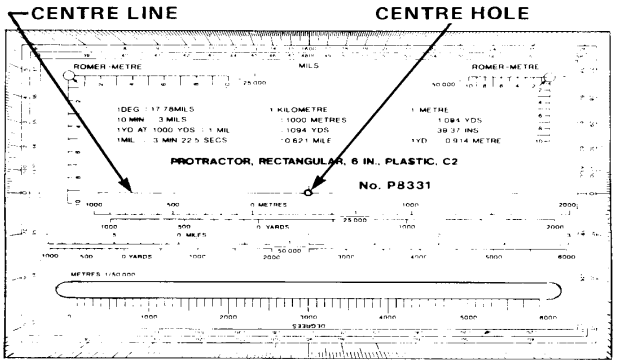
EO 405.11: MEASURE A GRID BEARING

The ability to measure a bearing from a map allows a map user to plan routes or activities before going into the field, and allows an easy method of communicating information about movement or location. A compass that is adjusted to compensate for declination will provide the equivalent of a grid bearing, and grid bearings may be set on it without further compensation.

SERVICE PROTRACTOR

The service protractor has several features:

a. it has 1:25 000 and 1:50 000 scale romers;
b. it has graduations in mils and degrees around its outside edges (a mils side and a degrees side); and,
c. it has scales for measuring distance.



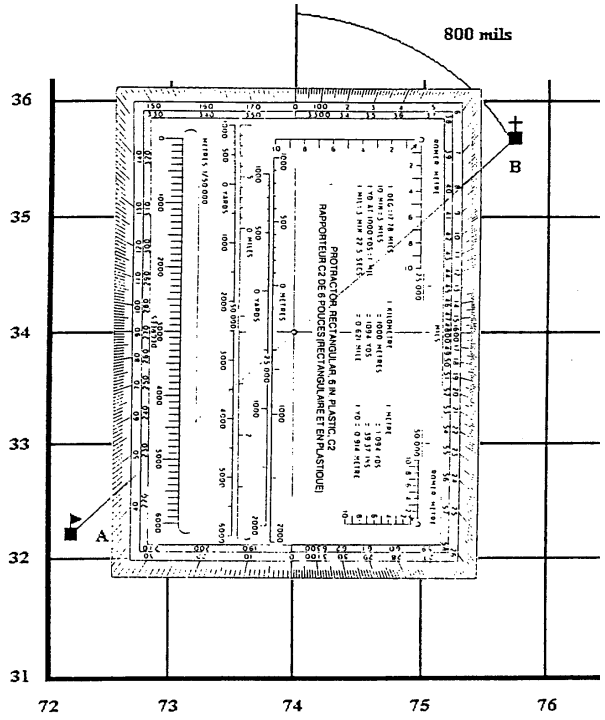
MEASURE A GRID BEARING WITH A PROTRACTOR

To measure a bearing using a protractor:

a. identify your start and finish points and mark them on the map;
b. draw a straight line from point A to point B (A is always your start point), this line is called a plotting ray;
c. place your protractor on the map with the centre hole over top of point A and 0 mils oriented to the top of the map (north);
d. your plotting ray should extend past the edge of your protractor, if is does not lengthen it;

e. ensure that the graduations where the plotting ray extends past the edge are mils and not degrees – simply rotate the protractor the other way if necessary;
f. align your protractor parallel to the grid lines by sliding the centre hole along the plotting ray (as shown below); then,
g. read the bearing at the point where the plotting ray crosses through the mils graduations on the side of your protractor. The answer for the example below is 800 mils.

You can double check your result using a simple observation test. By examining your plotting ray without a protractor, you should be able to guess pretty close at what the bearing is using your knowledge of the cardinal points and their mils equivalents. The plotting ray below seems to run at North-east – which is 800 mils. This way you can be more confident in your results.

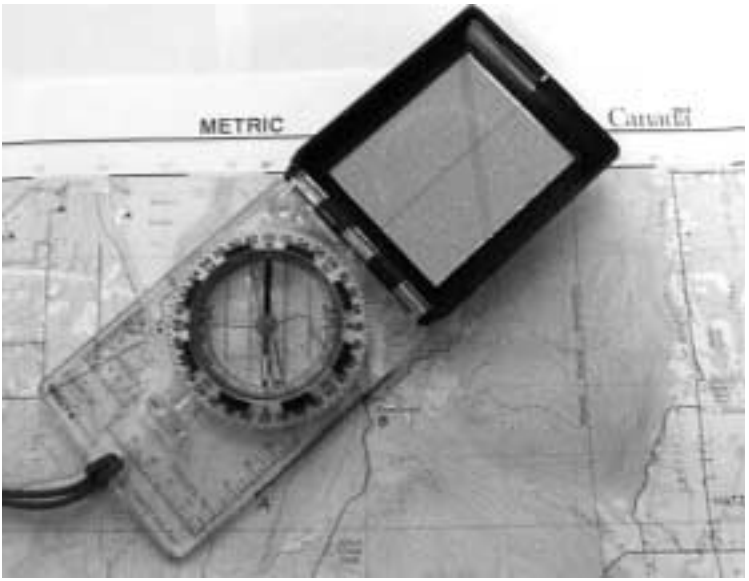


USING A COMPASS AS A PROTRACTOR

To use your compass as a protractor:

a. plot your points, then draw your plotting ray from point A to point B;
b. open your compass fully, lay it on the map with compass **mirror pointing in your direction of travel** (point B);
c. place the edge of your compass on the plotting ray;
d. rotate the dial so that the compass meridian lines are lined up Eastings on your map, and ensure **north on the dial indicates north on the map**; and,
e. read of the bearing at the luminous index point closest to the mirror.

REMEMBER – *the magnetic needle is not involved*!



EO 405.12: CONVERT GRID BEARINGS TO MAGNETIC BEARINGS AND VICE VERSA

If you find yourself using a compass that has no built in compensation for declination, or if the device on your cadet compass is broken, you will need to convert the bearings manually. Your compass will describe magnetic bearings and your map will describe grid bearings. We have already seen the necessity of compensating for declination.

The first step – is to make the unit of measure for the declination and bearings the same – i.e. mils declination and mils bearings, or degrees declination and degrees bearings. Remember that there are 18 mils in one degree for conversion purposes.

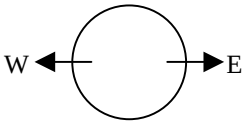
This simple table will assist you in converting bearings:

Magnetic	Declination	Grid

For West declination add going west ←

→ **For East declination add going east**

Always set up your table: **M**agnetic – **D**eclination – **G**rid –- **MDG** or *'My Dog's Groovy.'* Then always add in the direction referred to by the declination.



WEST DECLINATION TABLE

Example 1:

Magnetic	Declination	Grid
1725 mils	W 125 mils	1600 mils

For West declination add going west ←

Or the mathematical formula: 1600 mils + 125 mils = 1725 mils

Example 2:

Magnetic	Declination	Grid
3200 mils	W 250 mils	x
3200 mils	W 250 mils	2950 mils

For West declination add going west

Or the mathematical formula: **x** + 250 mils = 3200 mils
then: **x** = 3200 – 250
and: **x** = 2950 mils

Example 3:

Magnetic	Declination	Grid
5450 mils	W 16°	x
5450 mils	W 288 mils	
5450 mils	W 288 mils	5162 mils
5450 mils	W 288 mils	5150 mils

The final magnetic bearing was rounded down to the closest 25 mils.

For West declination add going west

Example 4:

Magnetic	Declination	Grid
x	W 300mils	6250 mils
0150 mils	W 300 mils	6250 mils

For West declination add going west

Practice:

Magnetic	Declination	Grid
	W 180 mils	3000 mils
4400 mils	W 270 mils	
	W 12°	5900 mils
0250 mils	W 375mils	

For West declination add going west

EAST DECLINATION TABLE

Example 1:

Magnetic	Declination	Grid
4800 mils	E 300 mils	5100 mils

For East declination add going east

Example 2:

Magnetic	Declination	Grid
	E 100 mils	2200 mils
2100 mils	E 100 mils	2200 mils

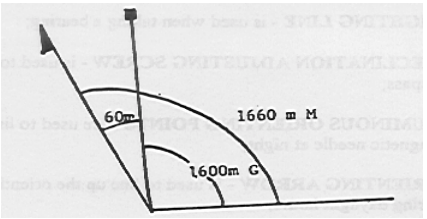
For East declination add going east

Practice:

Magnetic	Declination	Grid
	E 344 mils	6000 mils
1600 mils	E 270 mils	
2900 mils	E 21°	
	E 222mils	0100 mils

For East declination add going east

ANOTHER METHOD OF CONVERTING BEARINGS



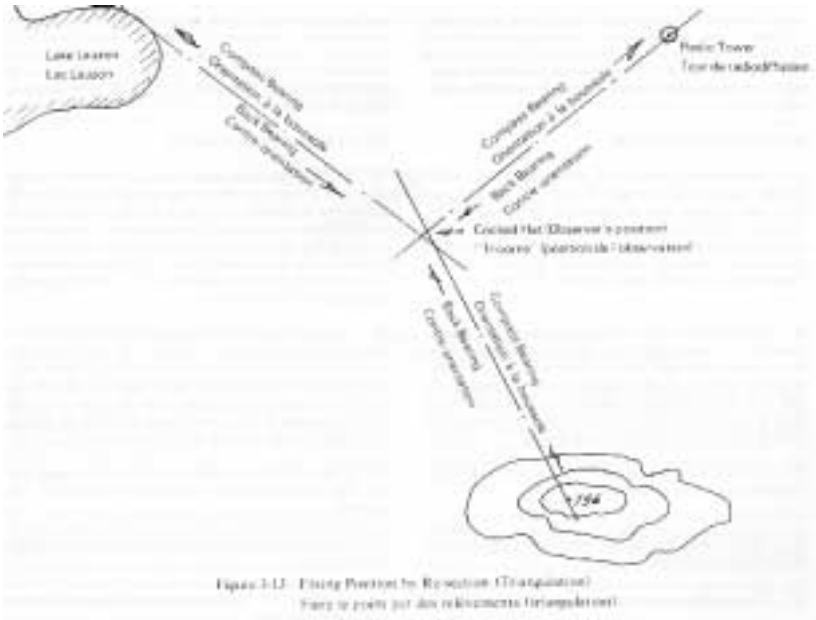
In the above diagram, a declination of **W 60 mils** is depicted. There is also a bearing line plotted. You will notice that, measuring clockwise, the distance is greater between magnetic north and the bearing line than it is between grid north and the bearing line. In this case, the grid bearing is 1600 mils and the magnetic bearing is 60 mils greater, or 1660 mils. For an East declination, the magnetic would be less than the grid.

EO 405.13: DETERMINE YOUR LOCATION VIA RE-SECTION

Re-section (also called ‘triangulation) is a simple way of finding your exact location. It does require that you identify at least two features (preferably three) on the ground and locate them on the map. Each feature that you choose should be at least 800 mils apart from the others. The most frequently used points are hilltops, church steeples, towers or prominent buildings. You may have to move to higher ground or move to a position where you can see for a distance to do this.

The theory behind re-section is that if you can measure the bearing from your position (unknown) to a located feature on the map and on the ground (known), you can then calculate the bearing back from the known towards the unknown. When you plot this back-bearing on a map, then add plots from one or two more back-bearings, the intersection of lines on the map will illustrate your location.

Three point:



Steps to follow to determine your position via re-section:

a. calculate, then set the current declination on your compass;
b. locate two or three landmarks and their corresponding location on the map – plot their position on your map;
c. measure a bearing to each point and calculate their back-bearings;
d. plot each back-bearing from its respective landmark; and,
e. your position is the approximate cross of back-bearing plots (or centre of the triangle created by three plot lines).

To speed the process up when using your compass as a protractor, measure the bearing to the landmark, then place the compass on the map with an edge of the mirror on the target landmark. Line up the compass meridian lines with the map's Eastings, with north on the compass dial oriented to north on the map. Then, draw a line along the aligned edge of the mirror (from the landmark) back along the base plate – effectively drawing a back-bearing. Repeat for each point.

If you can only find one landmark you can still calculate a rough re-section. Measure the bearing from your current position and plot the back-bearing on the map. Then, turn left (or right) 1600 mils, and march 100m straight. Measure a new bearing back to the one landmark, and plot the back-bearing. The position along your second back-bearing plot where the two lines are 100m apart (use your romer) is your approximate position.

EO 405.14: PLAN AND LEAD A NAVIGATION EXERCISE

PLANNING A NAVIGATION EXERCISE

Navigation exercises are the most effective means for cadets to practice their map skills. Almost any location can be used for a challenging navigation exercise. Considerations in planning must be made for:

a. safety of participants;
b. the skill level of participants;
c. the amount of time available for the exercise to be planned and conducted;

d. what skills need to practiced;
e. resources available for the exercise; and,
f. type of activity.

Terminology – for navigational exercises is borrowed from the sport of Orienteering. ‘Start’ and ‘Finish’ points are self-explanatory. A physical location on the ground, marked with a sign or symbol, that the participants must find is called a ‘control point’ – or ‘control.’ The route between controls is called a ‘leg.’ A navigation ‘course’ has a start, control points, and a finish.

Most types of navigation activity will include navigators searching for a control with a control marker placed above waist level, made from distinct bright colours. The position of these controls and their markers can be described by a circle drawn on the map (about 1 cm in diameter with the control centred in the circle) or by a six figure grid reference. Both these methods of describing location can be accompanied by a text (or symbolic) description of the terrain immediately around the control marker called a ‘control description.’

Safety – of the participants is your primary concern. Risks to safety can be found in terrain (cliffs, open water, etc.), or other natural hazards – which may change in severity throughout the year, or with changes of weather. Cadets navigating in pairs, or teams, may reduce the risks involved in terrain. Liability is also associated with safety – only plan navigation activities on public property, or private property to which you have permission to access. A landowner is required by law to inform users of very hazardous locations on their property.

Some military training areas have restricted or prohibited areas (especially around ranges). Ensure your training location is approved by the proper authorities.

The navigation exercise planner should carry out a full reconnaissance of the area as a stage of planning – a map recce is not sufficient.

Skill – of the participants is a key to safe and successful activity. Plan your exercise in terrain that the participants are capable of safely crossing, but that offers a challenge. The difficulty of a course is dependant on certain aspects becoming greater:

a. the location of the controls – moved to progressively more indistinct, or smaller features;

b. the length and difficulty of the terrain – becoming longer and more dense/hilly/etc. Beginner courses should be about 2 km, intermediate courses as much as 4, and advanced course up to 6-8 km;
c. the number of route choices – starting with one obvious choice, then having more;
d. the amount of skill required to navigate and keep oriented/located – starting with following trails and obvious handrails, then requiring greater cross-country skills; and,
e. the time expected or allowed to run the course.

Time – both what you have available to plan the course, and the time the participants will have to run it, are an important factor. It takes time to set up a course – far more than what you expect it to take the participants to run it. The amount of time required for planning and conduct increase with the difficulty of the course.

For experienced cadets to navigate a course that has most of its legs and controls off trails, estimate 60 minutes per 1000m. For simple courses along established trails and handrails, with obvious controls you can estimate about 20 minutes per 1000m for Green Star cadets. Estimate at least double the running time for planning and setting up a course. Always allow time for someone else to run through your course to check its suitability and safety before cadets try it this is called ‘vetting.’

Skills to be practiced – is an important training decision. The course and components of the course can be selected to practice the skills you have either just taught, or ones you want to emphasize. By dedicating a leg and control to a particular skill, you can assess the development of that skill(s) in the navigator. Keeping this in mind will also remind you to vary the skills required to reach each control, so that the course remains challenging and doesn’t become monotonous. One way to focus on a skill is to limit the information given to the navigator about the next point – e.g. highlight pacing by giving only a distance along a handrail to the next control.

Resources available – will enable or limit your options as a planner. These resources are not just the maps and compasses, but the available safety people, communications, size of training area, etc.

Types of activity – are virtually limitless. You can make the activity a competition for speed or accuracy, use it as a performance check, or simply use it as a great way to maintain interest and continued improvement. Some types of activities (borrowed from Orienteering) are:

a. score orienteering – where instead of the navigator following a pre-designated course, is given many controls (each with a assigned point value – more for the difficult or further points) and has to plan their own route to find as many controls (thereby gaining as many points) as possible during the set time limit;
b. line orienteering – where navigators must follow as closely as possible a described route (marked with a line on the map), and they will only find the controls if they stay on the line;
c. pin point or map marking – navigators follow a route marked on the ground, and when they reach a control they must mark its position on their previously unmarked map – this tests map reading accuracy;
d. window orienteering – where a course map is altered so that only the map information in the vicinity of the control is visible – a window around the control. This forces navigators to concentrate on control and attack point features, and provides challenges in navigation to them; and,
e. course orienteering – the standard navigation exercise, with a start, legs and controls and a finish – where navigators must visit each control in order, but may make their own route choices.

General course planning guidelines:

a. limit a standard course to about 10 controls;
b. make the first and last controls relatively easy to find – this improves a navigators confidence and keeps the flow of the course going smoothly;
c. for beginner courses, place controls on trails and handrails in obvious locations – for all other courses, place controls off the trails and at progressively more challenging locations (always position them close to useful attack points);
d. ensure that there is a clearly different route into and out of a control – this keeps navigators from finding a control by watching someone else come out of it;
e. don’t hide controls in dense or difficult terrain – your aim is to challenge navigators with the route, not to play hide and seek;

f. always position controls with obvious catching features behind them – especially for novice navigators;
g. establish clear boundaries for the exercise, and give all navigators a “safety bearing” – a bearing that if they follow, it will lead them to a safe area like a road or other distinct linear feature.;
h. set a time limit for the activity;
i. position water, first aid and supervisors at key controls in the course;
j. for controls without attending supervisors, establish a method (orienteering punch, sign-up list, etc.) for proving or establishing that a person has passed through the control – this helps determine compliance with the course, and it may assist in locating lost navigators;
k. always walk the expected routes of the participants to check for hazards, or possible opportunities for error – and then have someone with experience vet your course before allowing participants onto it;
l. never place an obvious hazard between one control and the next – almost an invitation for navigators to risk crossing it!
m. log the departure and arrival times of participants so you know who is still out on the course; and,
n. ensure all dangerous terrain is clear to the participants (marked permanently on all maps)– even if this means actually putting up some type of sign or barricade to warn of the danger.

It is always beneficial to brief cadets of course hazards, rules and safety bearings prior to sending them out on a course. Debrief the cadets after the activity to discover what they learned, as well as how successful the course was.

The level of difficulty greatly increases when navigating at night – a course considered intermediate during the day may be a challenge to senior cadets at night. Control markers at night should be illuminated, or at least reflective.

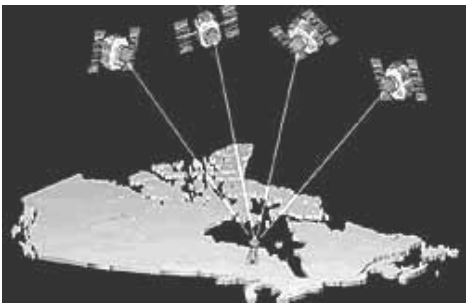
EO 405.15: DESCRIBE THE COMPONENTS OF THE GLOBAL POSITIONING SYSTEM

The Global Positioning system was developed by the United States military in the 1960’s as a navigational aid to Intercontinental Ballistic

Missiles (ICBM). The system was declared fully operational in 1995, with 24 satellites circling the globe every 12 hours, at an altitude of 20 200 km. It operates 24 hours a day 365 days a year, and covers the entire surface of the earth. The system is monitored and administered by the U.S. Department of Defense. Russia also has a system, with similar capabilities to the GPS, called the Global Navigation Satellite System (GLONASS).

COMPONENTS

The three components of the system are: the ground control, the satellites and the receiver. The ground control tracks the satellites to monitor their position and to ensure their atomic clocks are synchronized. The satellites, using the information supplied by the ground control, broadcast radio signals of their position, time and velocity. The receivers process the radio broadcasts from the satellites and use that information to determine position. A GPS receiver relays information about your location using standard grid references (up to 10 figure GR), and latitude and longitude. Civilian and military receivers operate differently and have different accuracy's – the civilian receiver is accurate to 15-100m horizontally, and 100-156m in altitude – and the military receiver is accurate to 1-16m horizontally. Even 100m accuracy is far better than most methods of manual resection!



A typical receiver needs to receive broadcasts from 4 satellites in order to process an accurate position. Through a process of triangulation, the receiver uses three signals to calculate position and it uses the fourth signal to confirm the sychronization of time. Using information stored in its memory, a receiver has knowledge of the routes of all the satellites. Because each satellite broadcasts a unique number code, the receiver can differentiate and identify specific satellites. Using the

information in its memory, and comparing it against the information broadcast by the satellite, the receiver computes (using the speed of radio waves) its distance from each respective satellite. The key to this system working is how closely synchronized the satellite times are.

Each satellite actually broadcasts two separate number codes, a Precision (P) and a Coarse Acquisition (CA) code. The P code is a lengthy series of numbers only repeated once every seven days, the CA code repeats every millisecond. The P code is transmitted on two frequencies, the CA code on one. Military GPS use both the P and CA code, civilians receivers use only the CA code.

The military receivers, because of the use of two frequencies, and much more detailed information from the satellites, are very accurate. The civilian receivers are not as accurate for these main reasons:

a. because they receive information on one frequency, they have no ability to adjust the information to compensate for ionospheric interference. Civilian receivers must use data stored in their memory to make these adjustments;
b. the minimal information provided on the CA code limits the receiver to 15m accuracy at best; and,
c. before 2000, the U.S. had established a method for making civilian receivers less accurate than their own military ones – a process called Selective Availability that scrambled the time transmitted in the CA code, thereby giving civilian receivers a variable error of 15-100m. The GPS no longer uses this function.

When first turned on, a receiver will download the orbit information (almanac) of the satellites. This takes about short period of time, and will have to be done if the receiver has not been used in 6 months, or if the receiver is taken more than 500km away from the last location it downloaded its almanac. The time it takes to download and lock onto the satellites is called “Time to First Fix” (TTFF). The TTFF is reduced after a current almanac has been stored.

LIMITATIONS AND ERRORS

GPS receivers are limited by several factors:

a. ionospheric interference;
b. satellite geometry;
c. dense vegetation or rocks blocking the signals;

d. weak antenna;
e. correlation of map and GPS datum;
f. multipath signals;
g. low or dead battery; or,
h. damage to the unit.

Radio waves slow as they pass through the clouds of electrons in the ionosphere. This causes the GPS receiver to think that the satellites are farther away than they actually are. A military receiver, with two frequencies, can calculate the differences in the rates that the two waves slow, and adjust for the delay. Civilian receivers that use preprogrammed data, will always have a certain degree of error when compensating for this.

The position of the satellites in the sky, relative to your position, is called the “satellite geometry”, or “constellation”. Each receiver requires four satellites to calculate position, but these satellites may not be in the perfect position to give the most accurate calculations. The best possible constellation is one satellite overhead, and three more spread out across the horizon. The amount of error created by poor geometry is represented by the Position Dilution of Precision (PDOP) number, or an Estimated Position Error (EPE) value on the receiver. A high DPOP can equal an error of several hundred metres. When the DPOP is too great, or if the receiver cannot lock onto four satellites adequately an “outage” will result where your location cannot be calculated. Because the satellites move so rapidly, an outage caused by geometry will usually last only a few minutes.

Dense vegetation, rock, buildings and other solid obstacles may prevent a receiver from locking onto satellites, or onto satellites that would offer better geometry. Be aware of your surroundings and move to open ground when you need more accuracy, or have an outage more than a few minutes.

Antenna’s vary in strength and quality, and this will be more important in remote areas where satellite coverage is lower. While external antennas generally perform better than internal, they are more likely to be damaged. Quadrifilar Helix antennas, usually external, can pick up satellites on the horizon, but not ones directly overhead. Patch (microstrip) antennas work well for overhead satellites but can only pick up satellites above the horizon. Each receiver will have a “mask

angle," or the degree of elevation above the horizon a satellite needs to be before the receiver will accept its data (usually 5-10º).

As explained in Green Star, maps are drawn in reference to a set of datum. In North America, maps are usually NAD 27 or NAD 83. Most GPS receivers will use World Geodetic System 84 (WGS 84) datum – which is equivalent to NAD 83. There are many other datum in use around the world. Your GPS receiver must be set to use the same datum as the map you are using. This ensures that the grid reference the receiver gives you translates directly onto the map. Some series of maps produced in the Canadian NTS have incorrect datum information printed in the margin. The Natural Resources Canada web site (nrcan-rncan.gc.ca) has a list of the erroneous maps in their topographic map pages. With the change in datum, from NAD 27 to 83, the end result was a shift in grid lines:

a. northings shifted 222m north; and,
b. eastings shifted 10m east.

Multipath signals are created when a radio signal from a satellite bounces off a solid object (e.g. large rock face) before being read by the receiver. This gives the receiver the impression that the satellite is farther away than it actually is – thereby increasing the error in calculation. You can reduce or avoid multipath error by choosing the best possible location for using your receiver.

Reserve your battery strength by only using the GPS receiver when you need it, and not leaving it on all the time. Most land navigation is just as quick with a map and compass.

USES

The most common uses, and advantages of a handheld GPS are:

a. quick reference for your location in an emergency;
b. confirmation tool for map and compass skills;
c. confident navigation in featureless or confusing terrain and water;
d. confident navigation in poor weather and poor visibility;
e. compatibility with digital maps; and,
f. world-wide coverage.

GEOGRAPHIC INFORMATION SYSTEMS



Geographic information systems (GIS) uses computer technology to integrate, manipulate and display a wide range of information to create a picture of an area's geography, environment and socio-economic characteristics. Beginning with a computerized topographic map as its base, a GIS overlays and integrates graphic and textual information from separate data bases. Today, geographic information systems are commonly used for everything from basic mapping to supporting resource exploration and development, from environmental management to the planning and administration of transportation and telecommunications systems, utility infrastructures, urban development and land use.

NOTES:

NOTES:



Marksmanship 406

PO 406 MARKSMANSHIP

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INTRODUCTION

Marksmanship is an integral part of the Army Cadet Program in that it teaches self-discipline, confidence and allows you to compete equally in a recreational sport that is gender neutral. Any cadet with average eyesight, nerve and muscle coordination can excel in marksmanship. It is designed around Olympic-style competition with an emphasis on the safe handling and care of firearms.

EO 406.01: OBSERVE SAFETY PRECAUTIONS

Firearm safety is the number one priority on or off a range. Safety is everyone's responsibility, so you must do your part to prevent accidents. Follow these safety rules:

a. always treat a rifle like it is loaded;
b. never point a rifle at anyone;
c. always point the rifle in a safe direction, i.e. down range, or in a vertical position if transporting;
d. keep your finger off and away from the trigger until you are ready to fire;
e. always wear ear protectors while firing; and,
f. always wear safety glasses or shatterproof eyeglasses while on the range..

The safety precautions that are outlined below are essential in avoiding accidents. You must read this section. Remember, marksmanship is an exciting sport when practiced safely.

SAFETY CATCH

The safety catch is a mechanism that, once engaged, prevents the rifle from firing by locking the trigger in place. On the Daisy 853C air rifle it is found directly above the trigger. To engage the safety catch, push it towards the right so that no red can be seen. For maximum security, keep your safety catch on until the moment before you fire your first pellet

SAFE RIFLE CONDITIONS

When not being handled, the rifle must be in a safe condition. The following options represent the three safe rifle conditions:

a. **In a rifle case** – the safety catch is ON, the bolt is forward, the action is not cocked, the safety rod is in the barrel and the pump lever is partially open;
b. **On the firing line** – the safety catch is ON, the bolt is to the rear and the pump lever is partially open; and,
c. **Not on firing line** – the safety catch is ON, the bolt is to the rear, the safety rod is in the barrel and the pump lever is partially open.

REMOVING A RIFLE FROM A CASE

The rifle case should be clearly marked on the outside with an arrow, indicating in what direction the rifle inside is pointing. The following steps should be followed to remove a rifle from its case:

a. place the rifle case on a flat surface with the arrow pointing in a safe direction;
b. open the case;
c. cock the action, leaving the bolt to the rear;
d. confirm the safety catch is ON;
e. confirm that the pumping lever is partially open;
f. slide the safety rod that is in the case in the barrel towards the bolt until it can be seen in the feed track;
g. remove the rifle from the case; and,
h. remove the safety rod if on the firing line.

INDIVIDUAL SAFETY CHECK

A individual safety check is performed to confirm that the rifle is safe and should be done upon receiving a rifle or when the “safe condition” of a rifle is uncertain. These are the steps required to perform an individual safety check:

a. open the bolt fully to the rear;
b. ensure the safety catch is in the ON position;
c. ensure the pump lever is partially open; and,
d. insert a safety rod into the barrel.

LEAD CONTAMINATION

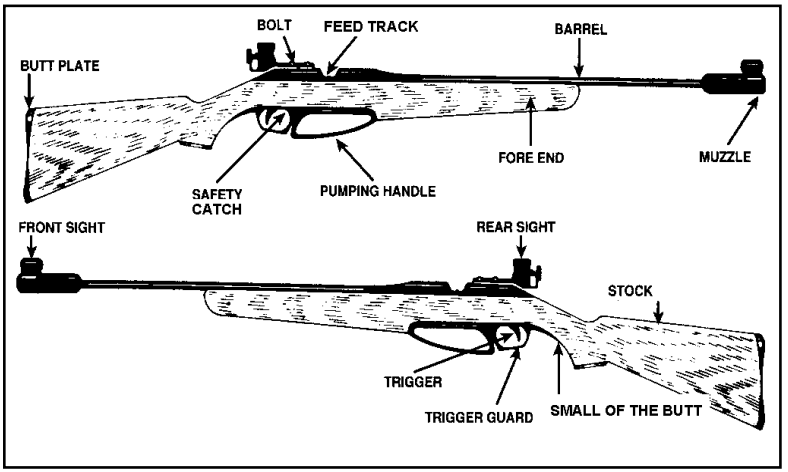
Handling pellets can leave a small trace of lead on your hands. Always wash them thoroughly after any contact with pellets. Also, never put the used pellets into the garbage. All lead pellets should be swept up, put into a container and treated as hazardous materials. Lead can be recycled.

EO 406.02: IDENTIFY PARTS AND CHARACTERISTICS OF THE DAISY 853C AIR RIFLE

PARTS OF THE DAISY 853C AIR RIFLE

The following parts are the most important ones to know:

a. **butt plate** – area which rests against your shoulder. It's adjustable with spacers which allows for a comfortable fit;
b. **small of the butt** – curved area directly behind the trigger guard where the hand controlling the trigger grips the rifle;
c. **stock** – complete wooden portion of the rifle;
d. **fore end** – wooden portion of the stock from the trigger guard forward;
e. **sling** – made of nylon and used to support most of the weight of the rifle. One end attaches to the sling bracket and the other to the upper arm;
f. **sling bracket** – adjustable metal clasp attached to the fore end where the sling is fastened;
g. **trigger** – moveable device that releases a spring and sets off the firing mechanism;
h. **trigger guard** – metal area that protects the trigger;
i. **safety catch** – prevents the rifle from firing by locking the trigger in place;
j. **bolt** – metal lever used for opening or closing the action;
k. **pump lever** – used to compress the air required to fire the pellet;
l. **sight system** – front – aperture inserts, rear – micrometer sight adjustable for elevation and windage;
m. **muzzle** – front end of the barrel with attachable barrel weight;
n. **barrel** – steel tube extending from the chamber to the muzzle;
o. **feed track** – is where the pellet is loaded;
p. **single pellet adapter** – plastic clip that aids in placing a pellet in the chamber;
q. **5 pellet clip** – plastic clip that holds a maximum of 5 pellets; and,
r. **chamber** – section where the pellet is held before firing.



The main characteristics of the Daisy 853C air rifle are as follows:

a. **Action** – a single pump pneumatic with a straight pull-bolt;
b. **Total length** – 97.8 cm;
c. **Total weight** – 2.5 kg;
d. **Calibre** – .177" (4.5 mm);
e. **ront Sight** – global type with interchangeable aperture inserts;
f. **ear sight** – fully adjustable peep rear sight with micrometer click adjustment;
g. **arrel** – high grade rifled steel barrel with weight;
h. **uzzle velocity** – 150.8 metres per second;
i. **aximum range** – 235.4 metres;
j. **oading** – single or auto indexing 5 pellet clip;
k. **tock** – wooden with adjustable length; and,
l. **afety catch** – manual cross-bolt trigger block with red indicator.

With a muzzle velocity of 150.8 metres per second, the Daisy 853C air rifle is not considered a 'firearm' under the current federal Firearms Legislation.

EO 406.03: LOAD, FIRE AND UNLOAD THE DAISY 853C AIR RIFLE

Note: Instructions below refer to a right-handed person – for left-handed use reverse the hands.

LOADING THE RIFLE

The following steps should be adhered to when loading the rifle:

a. pick up and hold the rifle with your left hand;
b. ensure the safety catch is ON;
c. place the sling on the rifle
d. pump the rifle;
e. when the pump handle is fully extended, keep it open for three seconds;
f. bring the pump lever back to the closed position (watch your fingers);
g. load a pellet or a 5 pellet clip; and,
h. close the bolt.

FIRING THE RIFLE

The following actions should be performed in order to fire the rifle:

a. when the RSO gives the command, place the safety catch in the OFF position;
b. aim the rifle at the target;
c. squeeze the trigger;
d. open the bolt, pump the rifle, re-load, aim and fire;
e. repeat the last step until you are done firing;
f. when you have completed firing, place the safety catch in the ON position; and,
g. lay the rifle down.

UNLOADING THE RIFLE

To unload the rifle, simply follow these steps:

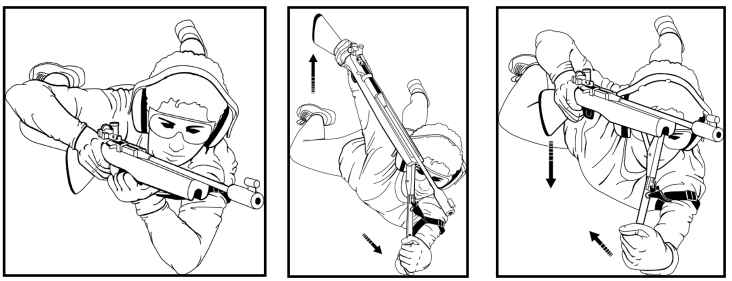
a. pick up the rifle and ensure the safety catch is ON;
b. remove the 5 pellet clip (if used);
c. pump the lever (hold for three seconds) and close;
d. move the bolt forward (do ***not*** insert a pellet);

e. place the safety catch in the OFF position;
f. aim the rifle at the target;
g. fire the rifle;
h. open the bolt;
i. place the safety catch in the ON position;
j. open the pump lever slightly; and,
k. wait to have your rifle cleared by the RSO.

PUMPING THE RIFLE

The technique described here is by far the best method as it involves the least movement and therefore less changes to your position:

a. remove the butt from your shoulder and rest it on the mat;
b. partially open the pump lever with your right hand;
c. return your right hand to the small of the butt;
d. grasp the pump lever with your left hand, halfway up the lever;
e. lift the rifle upwards until the pump lever is fully extended (keep your left elbow on the mat)
f. pause for three seconds when the pump lever is fully extended;
g. bring the rifle down, thereby returning the pump lever to the closed position;
h. load the pellet or the 5 pellet clip; and,
i. move the bolt forward.



EO 406.04: ADOPTING THE PRONE POSITION AND HOLDING THE RIFLE

GENERAL

A good position and a good hold in marksmanship are just a matter of finding a restful and relaxed position from which you can fire. This is the foundation that every marksman needs.

OBJECTIVES OF A GOOD POSITION

The main objective of a good prone position is to obtain a stable and uniform platform, that allows holding and aiming to be achieved with as little movement and muscular tension as possible.

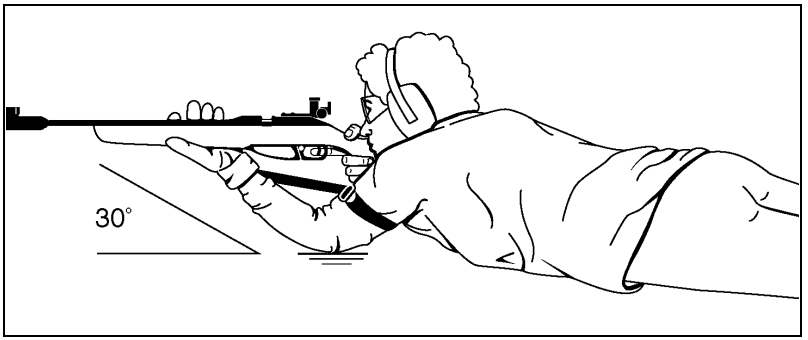
This position should be natural, without strain, comfortable, and stable with the body weight equally distributed while remaining consistent throughout.

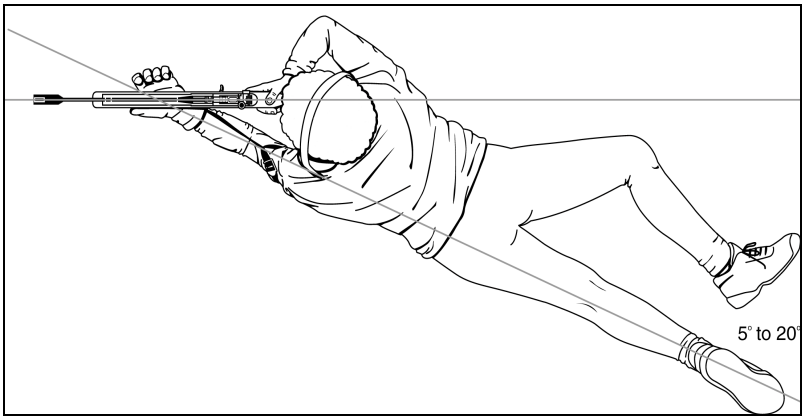
CHARACTERISTICS OF A GOOD POSITION

The following characteristics are essential points you should be looking for when you adopt the prone position:

a. your body should form a 5-20 degree angle with the line of sight;
b. your spine should remain straight;
c. your left leg should be parallel with your spine;
d. your right foot should turn out and point to the right while your left foot should either be straight or point towards the right;
e. your right knee should form a 30-45 degree angle with your left leg;
f. your left elbow should be positioned slightly to the left of the rifle;
g. your left forearm must form an angle greater than 30 degrees with the ground;
h. your left hand must rest firmly against the sling swivel, and your fingers should be relaxed and not grip the fore end;
i. once in position your right hand should slightly grip the small of the butt with constant pressure;
j. your right thumb should be placed on the stock directly behind the rear sight or around the small of the butt;

k. your right elbow should rest naturally where it falls, not too close or too far from the rifle;
l. your shoulders should be straight and form right angles with your spine;
m. the butt plate must be kept firmly in the hollow of the right shoulder; and,
n. your head should rest comfortably on the butt and remain straight.





USING A RIFLE REST

A good way to practice marksmanship skills is to use a rifle rest such as a sandbag, a scope stand, or a pile of books. This will help you understand technical skills while the rifle is held steadily in place.



The following steps should be followed when adopting the prone position using a rifle rest:

a. lay down to the left of the rifle;
b. place your left elbow on the ground;
c. pick up the rifle;
d. lay the rifle on the rest;
e. get into a comfortable position while keeping the rifle on the rest;
f. place the butt into your right shoulder;
g. rest your cheek on the butt;
h. place your right elbow on the ground;
i. adjust the height of the rest; and,
j. adjust the length of the butt with using spacers.

EO 406.05: DISCUSS PRINCIPLES OF MARKSMANSHIP

Having previously discussed position and holding the rifle, this section will deal with the marksmanship skills required for firing groups or application targets. These principles must all function in harmony – perfecting one while neglecting another could have detrimental effects on your performance. The five principles of marksmanship are:

a. Position;
b. Holding the rifle;

c. Aiming;
d. Breathing; and,
e. Trigger Control.

AIMING

Aiming the rifle is relatively easy to learn. However, you have to remember that aiming is either correct or incorrect, there is no middle ground.

The Master Eye – everyone has one eye which is stronger than the other – this eye is called the master eye. The master eye should be the one used in aiming the rifle. If you are right handed with a right master eye or left handed with a left master eye there is no problem.

Some difficulty may arise if you are left handed with a right master eye or right handed with a left master eye. You should try firing from both sides to determine which one you like best. However, you should not try tilting your head over so as to use your dominant eye and your natural side, i.e. using your left eye while firing right handed.

To determine which is your master eye, follow the steps listed below:

a. select a small object at least 10 meters away;
b. face the object and extend both arms in front of your body, towards the object;
c. with both eyes open, form a small, tight opening around the object with your thumbs and index fingers;
d. look at the object through the opening with both eyes open and draw both hands back towards your face. Ensure that the object remains centered through the opening of your thumbs and index fingers; and,
e. you should now be looking through the opening at the object with one single eye – the stronger of the two, or the master eye.

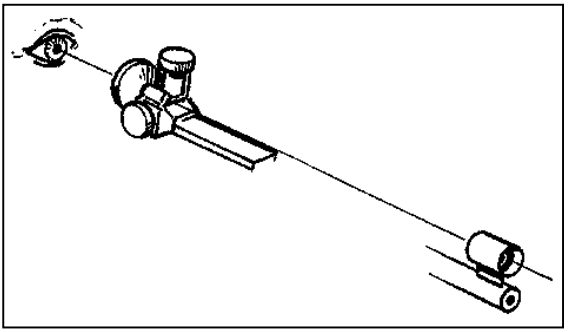


AIMING TECHNIQUE

Proper head position – keep your head as straight as possible. Such a head position will allow your eyes to look straight forward without strain.

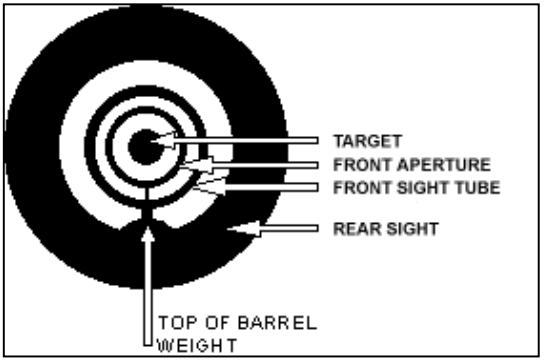
Eye relief – eye relief is the distance between your eye and the rear sight. This distance is usually 5-10 cm. Make sure that this distance is always the same because if you change it, your point of impact on the target will also vary.

Sight alignment – this is the most critical element of the aiming process. It is the alignment of the eye, the rear sight, and the front sight



Front sight – the front aperture should be selected to provide the best sight picture. There are three front sight inserts that come with the Daisy 853C: one post sight and two aperture-type sights. The post sight should not be used in cadet air rifle marksmanship. A good sized aperture should appear 1 ½ times bigger than the aiming mark.

Sight picture – to obtain a perfect sight picture, you must align the target within the front aperture, while centering the front aperture in the rear sight. A perfect sight picture should look like the diagram below:



If your sight picture becomes blurred while you are in the aim, close your eyes and start your aiming process over. Trying to fire at a target while your vision is blurred doesn't produce very good results!

BREATHING

Breathing is crucial in marksmanship because oxygen is essential in keeping your muscles energized. This includes the muscles that are involved in your position, ***as well as the muscles in your eyes***.

For maximum stability during firing, you should stop breathing for a few seconds. However, make sure you do not hold you breath for more than 5 to 7 seconds because after that, your body will start to be affected by the lack of oxygen.

You should follow this breathing sequence when you are firing:

a. take a few normal breaths until you feel comfortable and relaxed;
b. take shallower breaths until you finally exhale and hold your breath;
c. hold your breath for a maximum of 7 seconds;
d. fire the pellet: and,
e. return to normal breathing after firing.

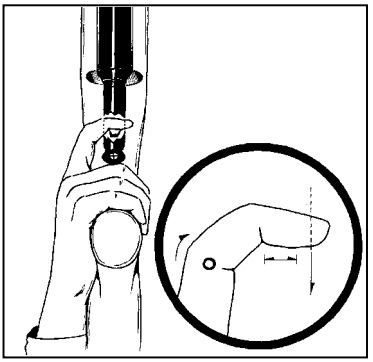
TRIGGER CONTROL

Good trigger control is the last technical step in carrying out a perfect shot. When incorporated with a proper breathing sequence, trigger control becomes second nature.

Position of the hand on the rifle – do not place too much pressure on the grip. Hold on to it in a natural way and make sure your grip is the same everytime. Your thumb should lay behind the rear sight or should wrap around the small of the butt.

Position of the trigger finger – the index finger should be placed on the trigger halfway between the tip of the finger and the first joint. The index finger should never touch the stock of the rifle and should be vertically centered on the trigger.

Squeezing the trigger – trigger pressure should only be applied when you are ready to fire and should be applied straight to the rear by bending the second joint of the index finger. Make sure the pressure is constant and slowly squeeze the trigger while you are holding your breath.



EO 406.06: DISCUSS PRINCIPLES OF MARKSMANSHIP – PART 2

This EO develops the skills and knowledge introduced in EO 406.04 and 406.05.

THE PRONE POSITION AND HOLDING THE RIFLE

Remember, the main objective of a good prone position is to obtain a stable and uniform platform, that allows holding and aiming to be achieved with as little movement and muscular tension as possible (EO 406. 04).

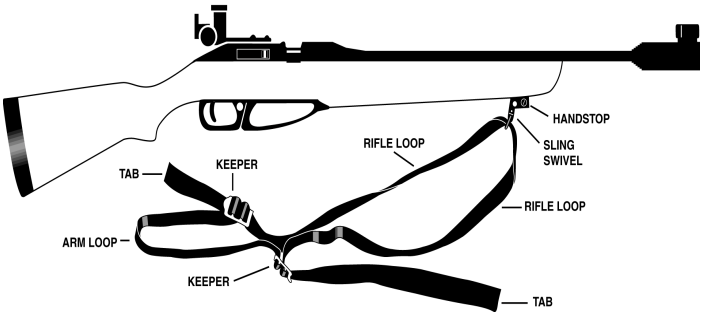
During EO 406.04, you applied the numerous marksmanship principles using a rifle rest. Now, we will replace this rest with the sling that is provided with the Daisy 853C rifle.

USING A SLING

The sling helps to support the weight of the rifle, ensuring minimal muscular effort on the part of the firer.

It is essential that the sling be assembled correctly in order to maintain a comfortable and stable position while firing. To assemble the sling, follow the steps listed below:

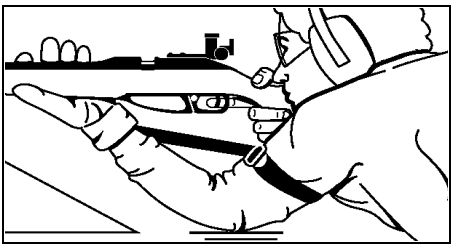
a. hold the sling parallel to the ground with the short section in your left hand, ensuring that the rounded tip of the top buckle is pointing left;
b. take the short section, loop it through the middle slot of the metallic keeper and then back down through the front slot. The short section will now form a loop; and,
c. turn the sling over and slide the sling swivel onto the long section. Ensure the sling swivel hangs downwards, as it will later attach to the rifle. Loop the long section up through the middle slot and then back down through the front slot. It is now important to take the remaining end and loop it back through the rear slot, locking it in place. This will ensure that the sling will not come undone or loosen during firing.

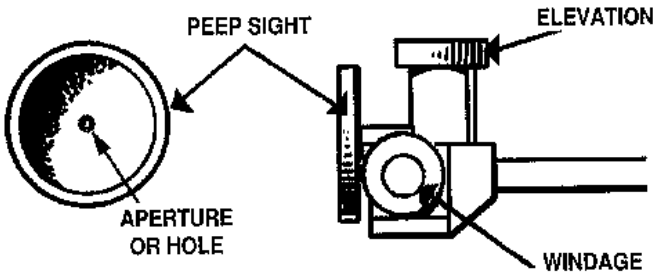


You should position the sling on your left arm, above your biceps. It can be held in place either by a rubber pad affixed on a shooting jacket or by a strap or hook attached to the jacket. If you are not using a jacket, you should keep the sling in place using a safety pin. This will prevent the sling from slipping down the arm while you are in position.

To attach the sling to the rifle, simply open the keeper on the sling swivel by pressing on the screw. Then, insert the swivel pin into the attachment clamp on the rifle and screw the keeper over the pin to ensure the swivel will not fall out.

If the sling is too loose, it will no longer act as a method of support and you will have to keep it in place using your muscles. On the other hand, if the sling is too tight, it will restrict the blood flow to your arm and it will cause a more pronounced feel of your pulse, or numbness. Therefore, the sling must be comfortable on the arm, providing maximum support, while not clinching the arm. You can alternate between sling and rest until you get accustomed to the weight of the rifle and the feel of the sling.





AIMING

During the EO 406.05, you learned many valuable points such as sight alignment, perfect sight picture, eye relief and head position. Now, we will look at two more important points, natural alignment and sight adjustment.

Natural alignment – is obtained when the rifle can be perfectly aimed at the target without being muscled into achieving this. To do this, you must make sure that your position (your body and your rifle) are properly aligned with the target.

In order to achieve a proper natural alignment, follow these steps:

a. assume the prone position, look through the sights and acquire a proper sight picture;
b. close your eyes, take several normal breaths and relax into a comfortable position;
c. once comfortable, look through the sights again. If you are perfectly centered with the target, proceed with firing;
d. if you are not directly centered with the target, you will need to re-orient your position slightly. To do this, you will need to pivot your body on your left elbow, more precisely:
 i. if you are aiming too far to the left, move your lower body slightly to the left;
 ii. if you are aiming too far to the right, move your lower body slightly to the right;
 iii. if you are aiming too low, move your lower body slightly back; and,
 iv. if you are aiming too high, move your lower body slightly forward.
e. close your eyes and do a final check of your alignment. If you are still not perfectly aligned start over. Remember to never move your left elbow when you shift your position around.

Sight adjustments – the rear sight has two knobs that are used to move the sight alignment on the target:

a. the **elevation knob** sits on top of the sight and moves the point of impact up or down on the target; and,
b. the **windage knob** is located on the right side of the sight and moves the point of impact sideways on the target.

The adjustment of the knobs can be measured in "clicks" that can be felt as the knobs are turned. It takes about three clicks to move the point of impact the width of a pellet.

To **lower** the point of impact, turn the elevation knob counterclockwise (to the left) and to **raise** the point of impact, turn the elevation knob clockwise.

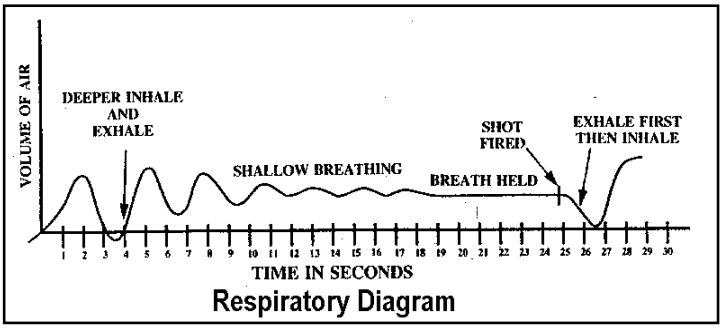
To move the point of impact to the **left,** move the windage sight counterclockwise (to the left) and to move it to the **right,** turn the windage knob clockwise.

Before making sight adjustments, always wait until you fire a few pellets in the same area. Try and avoid changing your sights after every pellet.

BREATHING

If we look back to the EO 406.05, we stated that breathing is essential to the body because it supplies oxygen to the muscles. Also, we mentioned that it was crucial that you held your breath for a maximum of 5-7 seconds when you fire your shot.

Here is a diagram to help you understand the breathing cycle:



Respiratory Diagram

TRIGGER CONTROL

During EO 406.05, we looked at three technical aspects of trigger pull: the position of the hand on the rifle, the position of the finger on the trigger and the art of squeezing the trigger.

Now, we will look at the last technical point necessary in proper firing: ***follow through***. Follow through could be defined as remaining in position for a few seconds after the pellet has been fired.

Follow through can be used for three main reasons:

a. improving the hold of the rifle;
b. ensuring there is no movement of the rifle after the shot has been fired; and,
c. calling the shot after it has been fired.

Resting in position for an extra few seconds ensures that no muscle move during firing. If your position is stable, the sight picture should return to exactly the same position after the pellet has been fired. If this sight picture is different after firing, some of your muscles are probably involved in holding the rifle.

Remember, follow through only takes a few seconds but it can greatly improve your performance level.

EO 406.07: FIRING THE DAISY AIR RIFLE IN THE STANDING POSITION

Note: Instructions below refer to a right-handed person – for left simply reverse the hands.

INTRODUCTION

The standing position is the easiest and quickest position to assume and does not use any artificial support like the sling in the prone position. However, this position has the smallest area of support, thus it is the most difficult to hold steady. You must come to grips with the fact that in standing, you may never achieve complete immobility.

CENTRE OF GRAVITY

The centre of gravity is the point where the weight of your rifle and your body are evenly distributed between your feet. In order to compensate for the weight of the rifle, you must bend your back to the right and rearward to gain bone support and stability. If you stand straight, the weight of the rifle will pull you to the front. Muscle strain will appear in your back if you attempt to keep your body from falling forward.

OBTAINING A GOOD STANDING POSITION

The main objective of a good standing position is to support the weight of the rifle in a stable manner without using muscular strength.

The standing position should:

a. be comfortable;
b. be without strain;
c. be stable;
d. allow good circulation and breathing;
e. be as such that body weight is evenly distributed between the feet; and,
f. be consistent throughout the firing session.

It is important to build a correct position and then fit the rifle to the position.

CHARACTERISTICS OF A GOOD STANDING POSITION

These characteristics and all other ones mentioned in this chapter are intended for a right-handed marksman and must be reversed for a left-handed one.

The Characteristics of a good standing position are:

a. your body should face to the right approximately 90 degrees to the target;
b. your feet should be shoulder width apart and you should try to stand on the firmest surface possible. Use comfortable flat sole shoes or boots to add stability to the position;
c. distribute the weight of your body and rifle equally between your feet;
d. your feet should point straight ahead in relation to your body or you may turn one or both feet slightly outward for comfort;
e. your legs should be straight but not locked. Locked knees will affect blood circulation eventually causing increased discomfort and unsteadiness;
f. your hips should be 90 degrees to the target and not thrust forward;
g. your left arm should rest against your rib cage; and,
h. your left elbow should be almost directly under the rifle. Muscles should not be used to support the left arm. The muscles in your left arm must not be used to correct sight alignment.

You have to develop a proper centre of gravity between your body and rifle. This can be achieved through the use of back bend and body twist. To do this:

a. place the rifle in your shoulder, bend slightly backwards at the waist, ensuring your legs remain straight; and,
b. twist your torso from the small of your back.

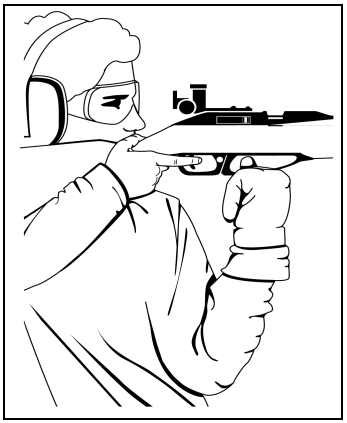
A correctly executed back bend and body twist will result in the weight of the rifle-body mass being supported by the bones of the lower spinal column. Therefore, the standing position utilizes the bones of the body to support the weight of the rifle, not the muscles.

The combination of back bend and body twist is the most important feature of the standing position and will contribute significantly to your abilities to perform well. However, discomfort is common during

the first few practice sessions. After a short period of time, however, this discomfort will diminish and an increasingly stable hold is achieved.

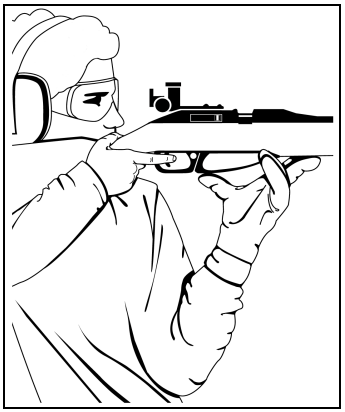
Your left hand supports the rifle just forward of the trigger guard. There are several ways of positioning your hand. They are:

a. using a clenched fist;





b. forming a “V” shape with your thumb and fingers;





c. using the “split fingers” technique; and,



d. using the heel of the hand while keeping the fingers relaxed.



Your right hand should be comfortable and under no strain. Your right arm should drop naturally to the side. Your trigger finger should not touch the stock. The position should allow your right hand, when placed on the pistol grip, to produce a straight back trigger pull.

Your head should be in an upright position with your eyes looking forward through the rear sight. To prevent involuntary body sway as a result of the balance mechanism in your inner ear, your head should remain straight and upright. The stock should rest high in your

shoulder pocket bringing the sights up to eye level to keep from tipping your head forward to aim. In order to keep your head erect, it may be necessary to slightly cant the rifle towards your head.

Your shoulders should be leveled, relaxed and may be oriented towards the target at approximately 15 degrees.

Your head should rest on the cheek piece of the rifle and should not be held up by your neck muscles.

Eye relief should be between 5-15 cm and should usually be slightly greater than in the prone position.

BODY ALIGNMENT AND AIMING

In the standing position, your rifle will sway more than in the prone position. To compensate for this movement, you may have to use a larger front aperture to keep the target within the ring.

To aim higher:

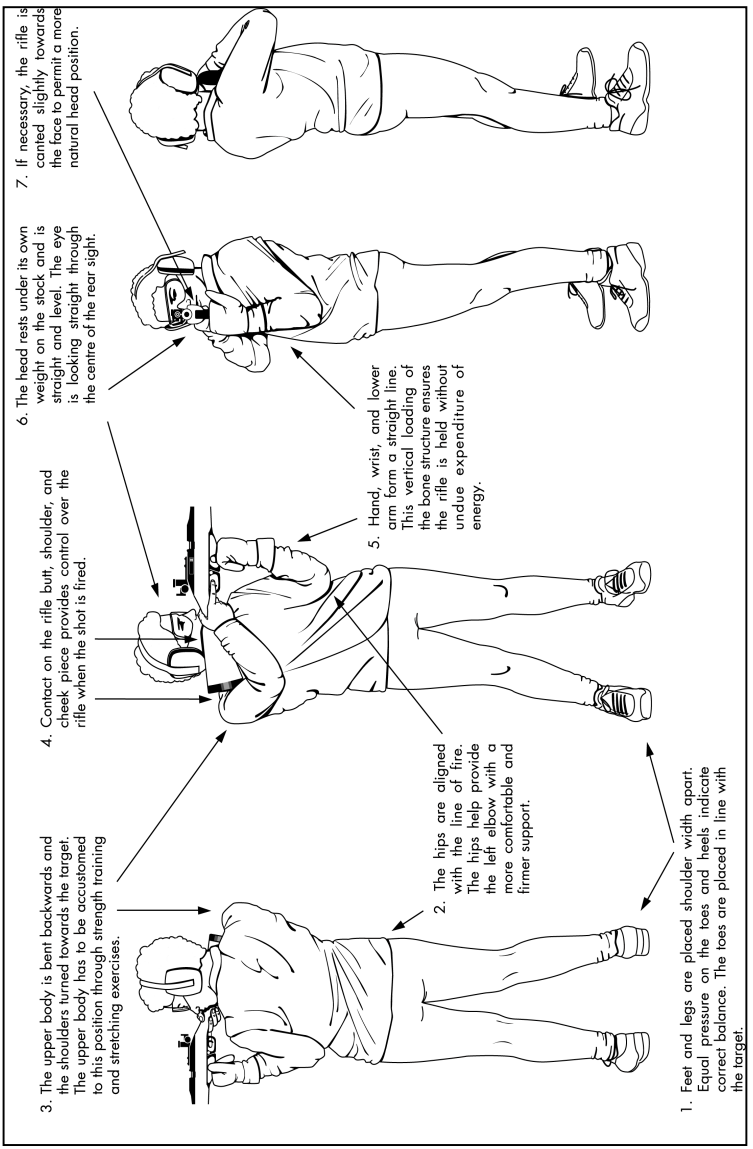
a. widen your stance;
b. pull your left hand back towards the trigger guard; or,
c. vary the type of left-hand position you use.

To aim lower:

a. reduce the width of your stance;
b. push your left hand forward on the forestock; or,
c. vary the type of left-hand position you use

To aim further left or right

a. shift both feet around the vertical axis in the desired direction for orientation; and,
b. shift your feet backward or forward for alignment.


3. The upper body is bent backwards and the shoulders turned towards the target. The upper body has to be accustomed to this position through strength training and stretching exercises.
4. Contact on the rifle butt, shoulder, and cheek piece provides control over the rifle when the shot is fired.
6. The head rests under its own weight on the stock and is straight and level. The eye is looking straight through the centre of the rear sight.
7. If necessary, the rifle is canted slightly towards the face to permit a more natural head position.
5. Hand, wrist, and lower arm form a straight line. This vertical loading of the bone structure ensures the rifle is held without undue expenditure of energy.
2. The hips are aligned with the line of fire. The hips help provide the left elbow with a more comfortable and firmer support.
1. Feet and legs are placed shoulder width apart. Equal pressure on the toes and heels indicate correct balance. The toes are placed in line with the target.

BREATHING, TRIGGER CONTROL AND FOLLOW THROUGH

The same techniques explained for the prone position continue to apply when firing in the standing position. However, you may need to pull on the trigger in a slightly more aggressive way at first due to the swaying of the rifle.

LOADING AND UNLOADING THE RIFLE IN THE STANDING POSITION

When you come up to the firing point you will notice some differences from the prone position. The rifle will be on a table either right in front of you, or to the side of where you will be firing. If you are using the single shot adapter your pellets will be laid out on the table so you can maintain your body position with little adjustment.

When you come up to the firing point:

a. pick up and hold the rifle with your left hand;
b. ensure the safety catch is in the ON (no red) position (the rifle should already be in a safe status with the bolt open fully to the rear and the pump lever partially open). Close the pump lever at this time;
c. establish a good standing position close enough to the table to allow access to the rifle and the equipment placed on the table. Ensure you do not touch the table during your firing cycle; then,
d. pump the rifle.

Pumping the rifle: Option 1 – while pointing the rifle down range, grasp the pistol grip with your right hand. Grasp the pump handle with your left hand. Pull downward with the left hand until the pump handle is fully extended. Using your left hand, close the pump handle back in the stock of the rifle. The rifle should remain stationary and always point down range during this process.

Pumping the rifle: Option 2 – while pointing the rifle down range, grasp the pistol grip with your right hand. Grasp the pump handle with your left hand. Place the butt of the stock under your right arm or shoulder for support. Pull downward with your left hand until the pump handle is fully extended. Using your left hand, close the pump handle back in the stock of the rifle allowing your underarm and

shoulder to help in holding the rifle steady when closing the pump handle.

When the pump handle is fully extended, pause for about three seconds. (This is very important; if done incorrectly, the rifle will have insufficient air pressure).

Load, fire and unload following the procedures detailed in EO 406.03.

EO 406.08 OBSERVE DUTIES AND RESPONSIBILITIES OF RANGE PERSONNEL

Range Safety Officers (RSO) are responsible for:

a. the safety of all personnel;
b. the implementation and observance of safety regulations;
c. the safe conduct of all activities associated with live range firing;
d. the security of all equipment and ammunition on the range;
e. ceasing the firing when, in their opinion, conditions exist which constitute a hazard;
f. ensuring administration of appropriate first aid and arranging for emergency medical treatment in emergency situations;
g. inspecting a range before and after firing; and,
h. reporting all unsafe conditions, recommending changes to safety orders, and reporting injury or damage to the Corps CO (or appropriate authority).

Range Assistants can be assigned duties on the range, but they do not take on the responsibilities of the RSO. Common duties for range assistants are:

a. supervising the set up, tear down and clean up of the range;
b. handing out equipment and ammunition;
c. organizing and supervising the cadets awaiting firing;
d. establishing relay lists;
e. conducting tests of skills before cadets can fire;
f. acting as a firing point assistant – assisting the RSO directly in the course of firing;
g. sentries outside access doors top the range area; and,
h. collecting and scoring targets.

The Range Safety Officer (RSO) and the Range assistants must inspect the range before firing to:

a. ensure the range Standing Orders are posted; and,
b. conduct a visual inspection of the range to confirm that the range is safe for use by observing the following criteria:
 (1) the range is unobstructed (i.e. the area between the firing point and the target is free of obstructions) and there are no objects behind the target backstops that could cause a pellet to ricochet back towards the firing line;
 (2) the access to the range is restricted; and,
 (3) the range is in good repair;
c. ensure that the lighting system is sufficient, or put up extra lights;
d. check that the first aid kit is complete;
e. verify that a telephone is available and it works – and that the telephone number for the nearest emergency medical service is posted close to the telephone;
f. ensure that the ventilation system is operating properly in order to get rid of unwanted fumes;
g. set aside an area to conduct practice for waiting relays (eg, holding, aiming and firing); and,
h. ensure that all the range equipment is in good repair and working normally.

After your range inspection is done, the next step is to order the stores required for the operation of the range. If you are assigned this task, you must prepare a memo for your corps supply officer. The following is a suggested list of stores that you will require for an indoor range:

a. an area 15 meters long with about 2m width per firing lane planned, with controlled access;
b. sufficient targets (proper targets for the activity planned) and pellets;
c. one portable backstops per lane;
d. one shooting mat/carpet per lane;
e. spotting scope;
f. first aid kit and stretcher;
g. flags;
h. stop watch;
i. aural and eye protection – for every person on the firing line; and,
j. hand washing facility.

COACHING

Of all of your duties as a range assistant, coaching would have to be one of the most important.

As a coach you must:

a. know the basic principals of marksmanship;
b. have a calm, helpful manner;
c. have a desire to assist the competitors;
d. correct faults; and,
e. be enthusiastic and encouraging

Firing point sequence – coaches should take the following actions on the firing point:

a. position themselves on the right hand side of the cadet (left side for a left-handed individual) or at the back of the firing lane in the best position to observe without disturbing the individual or his position;
b. ensure that the cadet is lined up on the correct target and that the rear sight is correctly set and centered;
c. observe the individual's natural alignment. If necessary, adjust their:
 (1) position;
 (2) hold (coaches should be particularly aware of possible canting – when the cadet fires the rifle while it is tilted to the side);
 (3) eye relief;
 (4) breathing sequence;
 (5) trigger squeezing; and,
d. encourage the individual to relax and to rest during his relay.

Calling the shots – marksmen know where their shots land, even before they are spotted for them on the target, because they **know** whether the foresight moved or not. If it did not move, they know the bullet will strike where it was aimed. Marksmen are able to do this because they focus their full attention upon the sight picture and keep it there throughout the trigger squeeze and follow-through.

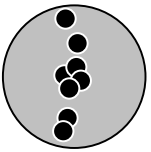
The most reliable method of ensuring the marksman follows through properly on the range is to have her/him call the shots.

The Clock System – is used for accurately describing the location of a hit on a target. Imagine that the target is the face of a clock with 12 o'clock directly above the aiming mark, 6 o'clock directly below the aiming mark, 3 o'clock to the right, and so on. If, for example, the instructor who is spotting calls out that there is an eight at 9 o'clock, it will indicate that your shot struck the target in the 8-ring directly to the left of the aiming mark.

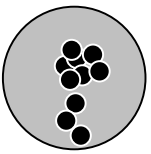
ANALYZING A TARGET

One of your responsibilities as a coach is to determine the cadets faults by examining the shots on the target. The coach should be able to discuss each target with the cadet and explain the reasons for an imperfect grouping. This is called target analysis.

Improper position at buttplate
Variance in breathing



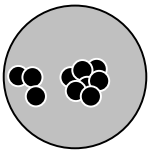
Sling slipping
Left hand moving forward



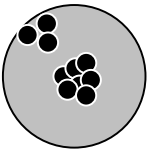
Anticipation of recoil

Jerking the trigger

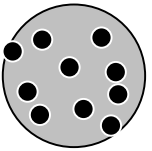
Squeezing the trigger at an angle or Improper usage of the sling



No follow-through, or anticipation



Poor usage of marksmanship principals or barrel needs to be replaced



The cadet who is given this kind of personalized treatment will accept the coach's advice as helpful, and techniques try to correct what was wrong. With this method of coaching the cadet will not have to be "pressured" into improving his/her marksmanship.

Remember a successful team in marksmanship is one that has the right "coach-marksman" relationship. This relationship is based on the mutual understanding that each party is equally responsible for making the team work.

RANGE COMMANDS AND PROCEDURES

COMMAND	ACTION
"Relay #__, cover off firing point"	Stand up, move behind your firing point and await further commands.
"Place your equipment down and stand back"	Lay your equipment down on the mat and stand back when finished.

"Adopt the prone position"	1) Follow the procedures outlined in EO 406.04; and, 2) Put on eye and ear protection.
Type of firing	This command includes information about the range and type of firing. i.e., Relay #__, 10 m, five rounds, Grouping, On Your Own Time...
"Relay, load, commence firing"	1) Pick up and hold the rifle with your left hand; 2) Ensure the safety catch is in the **ON** position 3) Pump the rifle as indicated in EO 406.03; 4) When the pump lever is fully extended, pause for three seconds; 5) Load the pellet or 5 pellet clip; 6) Close the bolt. 7) Place the safety catch in the **OFF** position; 8) Aim the rifle at the target; 9) Squeeze the trigger; 10) Open the bolt; 11) Repeat the sequence for each pellet; 12) Place the safety catch in the **ON** position and partially open the pump lever immediately after firing the last pellet; and, 13) Lay down the rifle.
MAY BE GIVEN	
"Relay, cease fire"	Stop firing immediately and put the safety catch in the **ON** position.
"Relay, resume fire"	Put the safety catch in the **OFF** position and continue firing.
"Relay, unload"	1) Pick up the rifle; 2) Remove the 5 pellet clip (if used); 3) Pump the rifle; 4) Close the bolt. 5) Place the safety catch in the **OFF** position; 6) Aim the rifle at the target; 7) Squeeze the trigger; 8) Open the bolt; 9) Place the safety catch in the **ON** position; 10) Open the pump lever 5-8 cm; 11) Wait to have your rifle cleared by the RSO; 12) Lay down the rifle; and, 13) Remove your eye and ear protection.
"Relay, stand up"	Stand up and leave your equipment on the ground.

"Change targets"	Move forward, walk down the lane to remove your old targets and replace them with new ones. Return to the firing point.
"Change relays"	Pick up your personal equipment and move off the firing point. The new relay covers off behind the firing point.

IMMEDIATE ACTION AND STOPPAGES

When a problem occurs, the cadet must point the rifle down range and notify the RSO. When a problem arises and the barrel needs to be cleared with a safety rod, be careful not to damage the bolt tip or scratch the crown of the barrel by pushing the safety rod through too hard. Do not fire a pellet that has been cleared with a safety rod.

PROBLEM	SOLUTION
Pellet incorrectly seated in chamber	Place the safety catch in the ON position. Open the bolt fully to the rear. RSO will insert a safety rod in the barrel to clear the pellet.
Pellet stuck in barrel	Place the safety catch in the ON position. Open the bolt fully to the rear. RSO will insert a safety rod in the barrel to clear the pellet.
Two pellets lodged in the barrel or chamber	Attempt twice to fire the pellets out. If unsuccessful: a. place the safety catch in the ON position; b. open the bolt fully to the rear; and, c. RSO will insert a safety rod in the barrel to clear the pellet.
Rifle does not fire	Conduct a functioning test: a. place the safety catch in the ON position; b. open the bolt fully to the rear; c. close the bolt; d. place the safety catch in the OFF position; and, e. squeeze the trigger. If the rifle still does not fire, conduct a pumping functioning test: a. place the safety catch in the ON position; b. open the bolt fully to the rear; c. pump the rifle; d. close the bolt;

	e. place the safety catch in the OFF position; and, f. squeeze the trigger. If the rifle still does not fire, clear the rifle. a. place the safety catch in the ON position; b. open the bolt fully to the rear and partially open the pump lever; and, c. RSO will insert a safety rod in the barrel to clear the pellet.
Air escapes from the pump	Replace the O Rings and lubricate the foam wiper ring.
Aperture size is incorrect	There are three aperture sizes and only two concern this type of usage. Use the larger or smaller of the two.
Bolt sticks (malfunction)	Check that the bolt lever is in its proper place. Ensure that there are no pellets stuck in the barrel or chamber.
Butt plate screws are too short	Replace screws with longer ones (#6-32).
Front sight is unstable	Tighten or replace the barrel weight.
Pump friction	Place **one** drop of oil on the lubricating sponge of the pump.
Rear sight is unstable	Tighten the rear sight screws. Be careful not to strip the screws by over tightening
Rear sight micrometer will not turn	Replace the sight.
Stock is broken	Replace the stock

CLEANING

Do not attempt to clean a rifle until individual safety precautions have been performed on the rifle and it is certain that the barrel is clear of any obstructions.

General – a dirty bore will eventually cause accuracy problems. Many inaccuracy complaints can be traced back to dirty bore usage. Therefore, air rifles must be cleaned and maintained on a regular basis in order to ensure sustained accuracy.

Although air rifles do not suffer from powder deposits as do smallbore and largebore rifles, they do however, experience a build-up of residue in the barrel. This residue takes two forms: leading and caking. "Leading" residue results from traces of lead pellet that are left inside the bore as the pellet travels down the barrel. "Caking" results when residue from compression chamber air blown into the bore condenses in the barrel.

It is important to note that air in the compression chamber will be super heated for a fraction of a second during the firing sequence. This can cause "dieseling" – the detonation of the lubricant inside the chamber. Only high flash point lubricants (i.e., SAE 30 motor oil) are approved for use on air rifles and are to be used for their cleaning and maintenance.

Cleaning pellets – The .177 calibre felt cleaning pellets are simply inserted into the chamber and fired in the same manner as a normal pellet. When conducting preservation maintenance, the natural absorbency of felt allows it to hold oils and lubricants, resulting in an even, protective film throughout the barrel.

Before and after firing cleaning – two to three felt cleaning pellets should be fired through the bore to ensure it is clean.

Periodic cleaning – the bore must also be thoroughly cleaned after every 1000 shots fired. Petroleum-based cleaners or preservatives must not be used. These solvents will damage seals and may result in dieseling. Use only SAE 30 motor oil. The following steps should be followed for periodic cleaning:

a. fire a felt cleaning pellet soaked in SAE 30 motor oil and wait five minutes; and,
b. fire three felt cleaning pellets.

CLEANING THE BORE	
When	**Action**
Before firing	Fire 2-3 felt cleaning pellets
After firing	Fire 2-3 felt cleaning pellets
Periodic	1) Fire a felt cleaning pellet soaked in SAE 30 motor oil 2) Wait five minutes 3) Fire three felt cleaning pellets
Storage of three	1) Fire 2-3 felt cleaning pellets

months or longer	2) Fire one felt cleaning pellet soaked in SAE 30 motor oil 3) Fire three felt cleaning pellets when taking rifle out of storage

Cleaning before storage – for purposes of preservation and bore deterioration prevention, a rifle that is to be stored over a three month period of time or longer should have two or three felt pellets as well as a felt pellet soaked in SAE 30 motor oil fired through its barrel. No other felt pellets should be fired as the oil should remain in the barrel.

Stock – should be frequently wiped clean with a damp cloth.

Exterior metallic parts – of the rifle should be cleaned on a regular basis with the aid of a lightly oiled flannel patch. The pivot points should also be lightly lubricated on a regular basis.

NOTES:

NOTES:



Instructional Techniques 409

PO 409 INSTRUCTIONAL TECHNIQUES

EO	DESCRIPTION	PAGE
01	List Principles of instruction	9-1
02	List methods of instruction	9-6
03	Prepare a lesson plan	9-9
04	Ask a question	9-16
05	List five types of verbal support	9-18
06	Make a visual aid	9-19
07	Review the principles of instruction and the preparation to a lesson	9-19

INTRODUCTION

The learning process is internal, and cannot be directly observed. Therefore, to determine if learning is occurring, we must observe changes in human behaviour. **Learning is a relative change in behaviour resulting from experience.** Learning involves change in one or more of the following categories of behaviour. The first is a psychomotor (skill lesson), e.g. drill. The second is a cognitive (knowledge lesson), e.g. fundamental training. The third is an affective (attitude lesson), e.g. the Cadet Harassment and Awareness Program (CHAP). Each type of lesson requires a slightly different approach by the instructor. Because learning is essential to the Army Cadet Training System, it is vital for Instructors to understand how people learn.

Learning occurs under a variety of conditions, depending on the nature of the skills, attitudes, or knowledge to be learned. Instruction must be planned and given accordingly. An effective instructor will:

a. master the material being presented;
b. observe Principles of Instruction when planning a lesson;
c. make the learning process as successful as possible; and,
d. present subject matter so that it is easily understood.

EO 409.01 LIST PRINCIPLES OF INSTRUCTION

As with leadership, instruction is more of an art form than a science. As an instructor, you must be creative, enthusiastic and attentive to each of the cadets in your class. It is no simple job and it takes

preparation and practice to be an effective teacher. In order to develop this art several Principles of Instruction have been developed:

a. **I**nterest;
b. **C**omprehension;
c. **E**mphasis;
d. **P**articipation;
e. **A**ccomplishment; and,
f. **C**onfirmation.

ICEPAC

Interest – the instructor must create and maintain the interest of the class members. The use of competitions and games are an excellent way to stimulate curiosity and maintain interest.

FACTOR	**TECHNIQUE**
Information	Inform cadets of the purpose of the lesson and the advantages this new knowledge or skill will give them
Enthusiasm	Display enthusiasm for the subject matter, and motivate the cadets to be enthusiastic about it.
Variety	If practical, use more than one instructor (team teaching) to present material. Use an appropriate variety of training aids.
Realism	Move away from the classroom and conduct training under realistic conditions.
Participation	Involve cadets in knowledge lesson by asking questions Ensure cadets participate early in a skill lesson. Use speed and/or ability competitions or games to reinforce learning toward end of lessons

Comprehension – the instructor must make sure that each cadet understands what is being taught. Determine the knowledge level of the class, and teach at the level of the class. Allow time for questions from the class – you will be able to judge their comprehension by the questions they ask.

FACTOR	TECHNIQUE
Logic	Organize material into logical order by proceeding from known to unknown, and moving from the simple material to the more difficult.
Questions	Ask questions throughout a knowledge lesson to assess cadet comprehension.
Observation	Watch for unusual expressions that may indicate a cadet's difficulty. Observe cadets as they practice skills to help them correct mistakes.
Review	Ask review questions at the start of class to ensure cadets are at the required level.
Assignments	Review any end-of-class assignments prior to the start of next class.

Emphasis – some points are more important and require you to make them stand out. Try to use as many senses as possible in your lessons. Touch, sight, hearing, and even taste and smell can help a cadet remember a teaching point.

FACTOR	TECHNIQUE
Scheduling	Allocate teaching time to the importance of the teaching points (TPs) of the lesson.
In-class review	Repeat TPs during lesson.
Reinforcement	Knowledge – ask questions.

	Skills – practice. Attitude – Discuss, act out scenes, and/or use audio-visual aids to support TPs.
Post-class review	Encourage note taking for later review, distribute handouts covering essential elements of TPs.

Participation – if the cadets are actively involved with the lesson they will retain the information better – **learn by doing**. Get everyone involved by doing practical exercises, games, etc. In large groups, ask questions, divide into smaller work-groups, or conduct activities where many can participate at once. Ensure that participation is encouraged from all cadets. Allow cadets who are doing well to mentor cadets who are having difficulty. Avoid activities that focus on only a few cadets.

LESSON	TECHNIQUE	GUIDELINE
Knowledge or Attitude	Ask questions	Ensure questions are thought-provoking and open-ended.
	Ensure cadets take part in group or guided discussions.	Encourage them to stay on topic.
Skill	Ensure early involvement by students.	Stress importance of doing it right the first time.
	Ensure ample practice time.	Make sure sufficient supplies and equipment available.
	Maintain close supervision during practice session.	Correct mistakes as they occur.

Accomplishment – give the cadets a feeling of success by telling them that they have done well in the lesson. If some cadets had difficulty in the class, spend some extra time with them and encourage them. Maintaining a sense of accomplishment requires that cadets use the

knowledge or skill that they learned again soon after the class, and that new skills and knowledge are tied into previous learning.

TECHNIQUE	**RESULTS**
Inform cadets of TPs	Cadets know what is expected of them.
Be clear and concise	Cadets learn easily, which creates satisfaction.
Keep cadets informed of their progress	Cadets take responsibility for their progress. Cadet can build on strengths and weaknesses.
Compliment cadets on good work.	Cadets want to continue doing work the correct way.

Confirmation – it is your responsibility to ensure that learning has occurred. Do this by confirming the information at the end of each stage and at the end of the overall lesson. You can ask questions or give an end of lesson test.

ELEMENT	**TECHNIQUE**
Practice	Observe the cadet practice skills.
Exercises	Provide exercises or guide discussions that stress the key points of the lesson.
Questions	Listen carefully to answers to questions.
Tests	Conduct end of lesson tests and periodic Performance Objective checks.
Observations	Note and provide feedback of cadet's behaviour.

EO 409.02 LIST METHODS OF INSTRUCTION

INTRODUCTION

Instruction is the art of getting someone to learn something that they did not know before. The speed and success of learning depends upon the method chosen to instruct a skill, knowledge or attitude – the method of instruction. Instructors must note that one period of instruction does not have to use exclusively one method, but can be a combination of several.

CHOOSING A METHOD

The method of instruction must match as closely as possible the environment where the cadets will use their new skill, knowledge or attitude. I.e. teach shelter building outside with actual materials, not in a classroom in a lecture. The method must also allow for the greatest cadet participation in learning. The Course Training Plan will give recommendations on the method of instruction to be used for each period.

There are two main instructional methods; the “lecture” and the “demonstration-performance.”

LECTURE METHOD

The lecture method is used to impart specific knowledge or attitudes to cadets. The advantages of using the lecture method are:

a. large class size;
b. large amount of material can be covered;
c. no elaborate equipment required; and,
d. preparation is simple.

Disadvantages are:

a. cadets who have difficulty with information have less opportunity for individual confirmation;
b. some cadets do not learn by only listening; and,
c. knowledge imparted by lecture is not easily remembered.

A successful lecture is interactive and includes group discussions, question and answer periods, interesting visual aids, and/or using handouts to help the cadets assimilate the information.

DEMONSTRATION-PERFORMANCE METHOD

The demonstration-performance method is based on two main human tendencies: people learn by doing, and people learn by imitating. It is primarily used for learning skills. The cadets observe the performance of the target skill and rehearse it under controlled conditions. The advantages of this method are:

a. the cadets participate in the learning and therefore the level of interest can be kept high;
b. there is opportunity for cadets who have difficulties to get assistance from the instructor; and,
c. the instructor knows at each stage of the lesson whether the cadets are gaining the skills.

Disadvantages are:

a. the class size must be small in order to allow the instructor time to assess each cadet's development; and,
b. the cadets will learn from and imitate the instructor, so the instructor must be very comfortable and confident with the skill.

The four essential phases of a demonstration-performance lesson are:

PHASE	ACTION	DESCRIPTION
1.	Explanation	Instructor describes skill to be learned and why it is needed. Instructor describes each step to be followed plus the desired end result.
2.	Demonstration	Instructor demonstrates exact procedure. Complex skills are demonstrated in "slow-time" or distinct parts. Each step may be explained as demonstrated. Cadets are provided the oppurtunity to ask questions.
3.	Supervised Performance	Cadets practice the skills step by step under supervision.

		Complex skills are practiced in slow time until cadets are competent enough to try them at normal speed. Supervisor provides assistance, correction, or re-demonstration as necessary. Practice under supervision continues until mastery is achieved.
4.	Evaluation	Instructor verifies mastery by administering the appropriate lesson check or test/enabling check/PO check. Check is performed as specified in the CTP. Cadets are informed of standard required. Instructor supervises check closely. Instructor informs cadets of results as soon as practically possible.

Other methods of instruction include:

a. **discussion method** – Cadets are guided in steps to reach instructional objectives by drawing out their opinions, knowledge, experience and capabilities, and by building on these to explore and develop new material;
b. **tutorial method** – instructor works directly with an individual cadet;
c. **seminar method** – instructor works directly with small group(s) which solve problems or tackle assignments as a team;
d. **independent study** – cadets receive instructional materials and work through them independently – the instructors monitors work that is produced;
e. study assignment method – self-directed learning where cadets complete assignments or exercises at their own pace. Suitable for senior, mature cadets;
f. **field trip** – a planned learning experience outside your local headquarters where cadets observe “real-life” application of the skill being learned;

g. **games and role playing methods** – giving cadets the opportunity for interaction in friendly competition, skill challenges, or by playing out target behaviours in realistic scenarios;
h. **opportunity teaching** – the instructor chooses a suitable moment to introduce a new skill, attitude or knowledge because the cadets are in an environment to give this new information meaning – e.g. on a hike, teaching lighting a stove right before lunch;
i. **behaviour modeling** – cadets acquire new behaviours by observing live or video models and then rehearsing the behaviours. E.g. CHAP training;
j. **peer learning and mutual instruction** – cadets are provided materials and direction, and then teach their peers using those materials and information;
k. **mentoring** – cadets who are strong in a subject are paired with cadets who are having difficulty. Mentoring also works with pairing senior cadets with junior cadets to give guidance, instruction and behaviour modeling; and,
l. **on the job training** – cadets are placed into real roles and supervised closely – by doing the "job" the cadet picks up the skills, knowledge and attitudes required.

EO 409.03 PREPARE A LESSON PLAN

The lesson plan is a method for organizing teaching material on paper. It is personal to the instructor and particular to the lesson being taught. The lesson plan contains the information included in the Course Training Plan (CTP) along with the personal ideas and thoughts of the instructor. A lesson plan is essential to good teaching because it helps you in organizing your lesson, gives you a sense of confidence, provides a ready reference if you forget your place while instructing and it ensures that the information is presented in a logical sequence.

COURSE TRAINING PLAN

The key to successful instruction is careful planning. The CTP is the blueprint for the construction of a course and is typically divided into seven chapters including:

a. **Chapter 1 General** – overall scope and background information;

b. **Chapter 2 Course Management Details** – administrative aspects;
c. **Chapter 3 Assessment** – manner of course cadet assessment;
d. **Chapter 4 Performance Objectives** – details each lesson;
e. **Chapter 5 Terminology** – defines abbreviations and terminology used;
f. **Chapter 6 Course Organization** – diagram of the course organization chart; and,
g. **Chapter 7 Training Support Requirements** – materials required to conduct the course.

The instructor must refer to Chapter Four, "Performance Objectives" to confirm the specific Performance Objective and Enabling Objective.

SAMPLE CTP ENABLING OBJECTIVE STATEMENT

CHAPTER 4: LESSON SPECIFICATIONS
COURSE TITLE: SILVER STAR COURSE

CTS NUMBER: A-CR-CCP-116/PC-001

ENABLING OBJECTIVE AND TEACHING POINTS	TRAINING DETAILS
INSTRUCTIONAL TECHNIQUES: 409.02	5. **TIME** — Two 30-minute periods.
1. **PERFORMANCE** — Prepare a lesson plan. 2. **CONDITIONS** — a. Given — (1) lesson plan format, (2) references, and (3) assistance from the instructor. b. Denied — NA. 3. **STANDARD** — The cadet must prepare a lesson plan on any classroom subject of the cadet's choice from among the subjects of the Green Star Course. 4. **TEACHING POINTS** — a. the CTP; b. introduction; c. body; d. test; and e. conclusion.	6. **METHOD/APPROACH** — a. lecture; and b. performance. 7. **SUBSTANTIATION** — A lesson plan is necessary in order to help an instructor organize the subject material, encourage self-confidence, provide the instructor with a sequence to follow; avoid blank-outs; and provide a guide for the instructor's presentation. 8. **REFERENCES** — Silver Star Handbook. 9. **TRAINING AIDS** — Copy of the instructor's own lesson plan for 409.02 to serve as an example. 10. **LEARNING AIDS** a. An EO from Green Star Handbook and CTP. b. Blank lesson plan forms. 11. **TEST DETAILS** — The cadet must submit a lesson plan to the instructor for correction by the end of the second period of instruction. 12. **REMARKS** — a. Use the first period of instruction to teach the theory and the second period of instruction for the course cadets to make up the required lesson plan. b. These two periods of instruction should be scheduled back-to-back.

CHAPTER 4: LESSON SPECIFICATIONS COURSE TITLE: SILVER STAR COURSE	CTS NUMBER: A-CR-CCP-116/PC-001
INSTRUCTIONAL TECHNIQUES: 409.02 (Cont)	c. The lesson plan that the course cadets are required to prepare for this period of instruction could be used to teach the required mutuals for their final grade. d. This EO covers the lesson plan for a skill and knowledge lesson only; the drill lesson plan will be dealt with under EO 409.04 as there is a format specific to drill.

THE LESSON PLAN

The lesson plan is an essential tool to ensure that instruction follows a specific, well planned, goal-oriented design. The lesson plan is divided into the following parts:

a. **Introduction** – build cadet interest and motivation;
b. **Body** – present each teaching point;
c. **End-of-lesson test** – confirm cadet's mastery of the TPs; and,
d. **Conclusion** – summarize key points and link to future lessons.

Introduction (may take 10% of lesson time) and includes:

a. who – introduce yourself;
b. what – they will be taught in this lesson, specifically listing the goals for the class (TPs);
c. where – they will apply this information;
d. how- the cadets will be tested at the end of the lesson; and,
e. review – of the previous material as required.

Body (may take 75% of lesson time). The body of a lesson plan presents the TPs divided into a series of stages:

a. briefly introduce each stage;
b. present each teaching point clearly;
c. cadet participation in a skill stage should involve lots of practice of the skill, while a knowledge stage should involve a lot of questions and discussion on the content; and,
d. confirm each stage.

End- of -lesson Test (may take 10% of lesson time) are based on the lesson objective. Guidelines for end-of-lesson test include:

a. written test – good for knowledge-based material;
b. observation of skill – plan required to manage and observe the skill; and,
c. combination of both – requires a plan to manage both.

Conclusion (may take 5% of lesson time) allows for summarization of key points and links them to coming lesson and "On-the-Job" use. An effective conclusion includes:

a. summary – review TPs, re-emphasize main points;
b. closing statement – link class to future lesson; and,
c. re-motivating statement – re-state the importance of the lesson.

LESSON PLAN – EXAMPLE

Lesson: Silver Star EO 409.05 **Date**: Wed. 22 Nov 00
Instructor: CWO K Zygouras **Time**: 1930-2000 hrs
Training aids: black board, chalk
pens, paper

INTRODUCTION **2 min**

Who: I am CWO Zygouras
What: I will be teaching you five types of verbal support
Why: You need to know these to help aid in cadet comprehension
Where: You will use these principles during periods of mutual instruction.
Test: There will be a verbal test at the end of the class.
Review: EO 409.04 -what is the purpose of questioning?

BODY	**4 min**
Stage One	
1) Comparison * what is it?	write answers on the board
- Bridges the gap between the known and the unknown	
– must be in close connection to what you are learning	
– list some comparisons	What is comparison?
* ask questions	
2) Reasons * what does this mean?	**4 min**
- they are logical explanation's that answer the question "why?"	
- explains the reason behind the rule or statement i.e. why was this rule created	What is reasons?
* ask questions	
3) Examples * why use examples?	
- used to clarify and simplify the idea	**4 min**
- use an example from the cadets background so they can relate to it	
* ask questions	Why use examples?
Stage one confirmation	**2 min**
Name two forms of verbal support and there uses	

Stage Two	**4 min**
4) Statistics * what does this mean? - used to illustrate a point - always round the number off. Who will remember 675.873? round to 676. It's much easier to remember. – try to keep statistics relevant to individuals in the classroom. * ask questions	Why use statistics?
5) Testimony * why use testimony? – quote someone who is an authority on the subject - tell a true story or experience that happened to you on the subject. * ask questions	**4 min** Why use testimony?
Stage two confirmation Name two forms of verbal support and there uses	**2 min**

END OF LESSON TEST **3 min**

What verbal support do the following examples refer too?

1) 347000? – statistics
2) "He fell into the water, that's why there's a rule." – reasons
3) "Cdt's Stabile and Vanic both received the corps perfect attendance award, because they did not miss even one day of cadets, including tag days." – example
4) "Cdt's Bobinsky and Roberts can both tell you the importance of magnetic declination and resection." – testimony

CONCLUSION **1 min**

I am CWO Zygouras. We have learned about the five types of verbal support. Remember the difference between "example" and "testimony". Congratulations to those who answered all of the questions correctly. Your next class is drill with MWO Taylor.

EO 409.04 LIST FIVE TYPES OF ASK A QUESTION

The use of questions is one of the most important techniques available to an instructor. How questions are asked can have a dramatic effect on the lesson. There are six purposes to asking questions:

a. stimulate mental activity – challenge and alert cadets;
b. evaluate learning – validates the learning, especially knowledge lessons;
c. arouse and maintain interest – involves cadets in the lesson;
d. teach problem solving skills – instructor presents problems through questions and cadets must solve;
e. guide and provoke thought – allows the instructor to guide thinking through development of a lesson; and,
f. control a lesson – open, close, or direct discussion, or highlight certain points.

It is important to stimulate and maintain interest at the beginning of your lesson. If you can find a good question to get the class interested at the start of your lesson, the cadets will pay attention throughout the class because they will be keen to learn the answer to your question. In addition, you should ask the question so that the cadets must answer based on what they think; in this way, you draw them into the class even more. Questions can also keep your cadets alert and their brains actively searching for answers and solutions. Some questions need not be answered immediately; sometimes it is good to let your cadets consider the possible solutions. Good questions can also help to guide thinking - the instructor can lead the cadets to a correct answer by asking a series of simple questions designed to direct them to a logical solution.

The qualities of a good question are:

a. it is easily understood;
b. it is complete and clear;
c. it should use appropriate vocabulary; and,
d. it should have only one correct answer.

Two types of questions are commonly used in a classroom lesson;

a. **participation question** – used during the lesson to simulate and maintain interest, promote mental activity, and guide the thoughts of the cadets; and,
b. **evaluation question** – used at the end of each stage of the lesson to confirm the cadet's level of comprehension.

Evaluation questions can also be asked at the beginning of the lesson to determine the retention of previous learning.

Other types of questioning techniques are:

a. lead-off – You start off with the beginning of the answer, but let the cadets think, then answer;
b. follow-up – used after a MTP or an important teaching point;
c. overhead – ask a question to the whole class;
d. direct – ask a specific question to a specific person; and,
e. reverse and rely – if someone is not quite getting the answer – relay it to someone who can help him or her out.

When asking questions of the class, use the "pose, pause, pounce, ponder, praise" method:

a. pose the question to the class;
b. pause to allow everyone to think of the answer;
c. pounce – select a cadet to answer the question;
d. ponder the answer given by the cadet, if an answer is unclear, have the cadet repeat the correct answer; and,
e. praise – confirm the correct answer and motivate the cadets.

Instructors should always encourage genuine questions pertaining to the lesson. Cadets usually ask questions because they have not understood the material or the explanation of some aspect of the TPs.

SITUATION	**TECHNIQUE**
Beginning of lesson	Assure cadets that questions are welcome.
Easy question	Occasionally, pass a question to another cadet, creating interest and encouraging participation.
Irrelevant question	Politely reject a question if totally unrelated to the subject being presented.
Answer unknown	If you do not know the answer, tell the class that you do not know, but will get back to them.
Question not heard or understood	Ensure all cadets heard and understood the question.
End of lesson	Invite questions at the end of the lesson to ensure full comprehension.

EO 409.05: LIST FIVE TYPES OF VERBAL SUPPORT

Good instruction must be convincing to be successful. TPs are accepted more readily when the instructor illustrates statements using verbal support techniques. As well, verbal support can be used to:

a. create interest;
b. clarify and illustrate;
c. emphasize; and,
d. add variety.

There are five types of verbal support techniques. To remember the types of verbal support use the acronym **CREST**:

a. Comparisons
b. Reasons
c. Examples
d. Statistics
e. Testimony

Comparisons – link the unknown to something familiar. Used to bridge the gap between present knowledge and knowledge to be learned. Take the information in the lesson being taught and compare it to something from everyday life. The comparisons must be meaningful and relevant.

Reasons – a logical explanation that answers the question “why" and explains why they are learning this material, or why a rule or SOP was created.

Examples – used to clarify and simplify an idea. Examples should be relevant to the cadets’ background so they can relate to what you are trying to explain.

Statistics – factual information to emphasize or support. E.g. “one out of every three cadets will attend a summer training centre this year.”

Testimony – the instructor can quote an authority on particular subjects, or relate a true story from their own experience to clarify a teaching point. Should be short and concise, and someone the cadets can relate with.

EO 409.06: MAKE A VISUAL AID

A visual aid is any resource or item used by the instructor to clarify, simplify or reinforce instruction. Training aids improve the effectiveness (through visual learning) and efficiency ("a picture is worth a thousand words") of instruction. Four types of training aids commonly used:

a. audio-visual aids and programs;
b. training equipment;
c. training devices; and,
d. simulators.

Audio-visual aids are used to:

a. emphasize or explain a TP;
b. bring realism to the classroom;
c. maintain interest; and,
d. assist the cadet in understanding lesson material,

Types of audio-visual aids include:

a. overhead projector (OHP) – used in front of the class by the instructor, with easily prepared transparencies, and can be used to provide lesson continuity by only uncovering the points as the lesson progresses;
b. chalkboard (and whiteboard) – easy to use and very flexible, can be prepared before lesson but requires good writing skills and instructor often has their back to the class;
c. flip chart – portable, easy to store and very flexible but requires neat handwriting and instructor has back to class when writing;
d. projected material (videocassettes, films, computer, slides) – provides realism and very attention getting but requires planning to acquire and use in the lesson. If necessary, explain each image on the screen, and prepare questions in advance so that the cadets will watch with a purpose;
e. models – easily permits cadets to see and operate realistic parts or machines without consequences of errors although cost, storage and class size may be problems;
f. actual object – add realism by getting cadets to handle the actual item however, sufficient items must be provided for the class to use, ideally one item for each cadet; and,
g. still graphics – use prepared charts, diagrams, sketches, drawings and photographs to show an object or location that otherwise would be impossible to explain.

As a rule of thumb, visuals should be used with the introduction of a teaching point that has a long technical explanation, when a teaching point is complex and difficult to visualize, or when your cadets look puzzled by your description. It goes without saying that the visual is also required during the confirmation stage of your lesson.

USING A TRAINING AID

To achieve maximum effectiveness from a training aid, the instructor must plan, prepare, select and use it carefully. Some guidelines to follow when using training aids are:

a. preparing the aid – ensure it is in good condition, available for the lesson, and that you are able to use it effectively considering class size, time available and ease of presentation;
b. preparing the instructor (you) – ensure lesson plan contains notes or cues on use and timing of each aid and practice the lesson using the aid;
c. preparing the classroom – place in classroom before the lesson, checking visibility from all parts of the room, and leave it covered or turned off until needed;
d. preparing the cadets – explain the function and purpose of the aid, and how it helps achieve the instructional objective;
e. presenting the aid – ensure that you do not block the cadets' view of the aid and encourage questions about the aid. (Note – the instructor must be present during a presentation in order to answer any questions and correct any problems with the equipment); and,
f. applying the aid – if the objective calls for the cadets to use the aid, have them start immediately after your presentation while memory is fresh.

NOTES:

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Public Speaking 410

PO 410 PUBLIC SPEAKING

EO	DESCRIPTION	PAGE
01	List the basic elements of speech preparation	10-1
02	Talk for three minutes on a topic of the cadet's choice	10-4
03	List the ways in which to avoid stage fright.	10-4
04	Talk for 5 minutes on a subject of the cadet's choice.	10-7

INTRODUCTION

Public speaking is a skill that everyone makes use of in their daily lives. Speaking in front of a group of people is challenging for many and you will need courage and self-confidence. Being comfortable in Public Speaking will assist you in Silver Star, where confident presentation is very important in effective Instructional Technique.

EO 410.01: LIST THE BASIC ELEMENTS OF SPEECH PREPARATION

The principles of effective speaking are considered under three headings: personality, preparation and presentation. These are called the three "P's".

PERSONALITY

Personality is really made up of attitude, appearance and voice:

a. **Attitude** – remember the following:
 (1) people judge you by how you address yourself to them; and,
 (2) a confident, poised, enthusiastic attitude is required. This attitude is reflected in your willingness to establish eye contact and to speak to your audience, not simply at them, or in front of them.

b. **Appearance** – can be one of the determining factors in your success or failure, since first impressions are often lasting impressions. You should always be correct in your dress and appear well groomed. Your gestures should be natural and contribute to, not detract from, what you are saying.

c. **Voice** – develop a good speaking voice by paying particular attention to the following:
 (1) pitch – vary your pitch by emphasizing and emoting (giving emotion to what you are saying);
 (2) volume – vary the force with which you speak and adjust to the conditions;
 (3) rate – vary the speed at which you speak. Consider that difficult material requires a slower rate;
 (4) articulation – is distinct speech, or the clarity with which you speak the parts of each word. You must open your mouth when you speak and be understandable to everyone in the audience;
 (5) pauses – they should be definite and planned. Clear breaks bring variety and interest. Pauses should punctuate, not mutilate; and,
 (6) pronunciation – learn to pronounce words correctly to win confidence and to avoid the unwanted attention a mistake attracts.

PREPARATION

Eight important points to consider when preparing a speech:

a. **select and limit the subject** – do not pick a topic that is too large to talk about in the time allotted;
b. **determine the purpose** – once you know the purpose or reason for your speech, it is easier to prepare your notes;
c. **analyze the audience and occasion** – talk at the level of the audience and prepare a speech that you think they can relate to and will be interested in. Get to know your audience – getting up in front of your fellow cadets and speaking is an excellent first step in making speeches. If you are speaking somewhere else, arrive early and meet some of the people at your speech. You will feel much more comfortable in front of them;
d. **gather the data and know your material** – every speech contains facts, make sure they are correct. Gather additional information when you can, it is always nice to know a little more about the subject that you are speaking about in case there are questions from the audience;
e. **outline the material** – brainstorm, this may bring out ideas, arguments, facts or statistics that may apply to your speech. Your information can be divided into: “must knows” – points

that are vital to your message; "should knows" – points that will augment your message; and "could knows" – points that you can bring up if you have time;

f. **organize and develop the speech into the introduction, body and conclusion**. Your audience will be able to follow you more closely if your thoughts are well organized. The introduction should have your name, the topic and purpose of your speech. The body should contain all the key information required to make your point. Do not add unnecessary information, instead use questions to the audience or visual aids to fill in time. The conclusion should wrap up all your main points and leave the audience with a clear understanding of the topic – not new thoughts!;

g. **plan visual aids** – a simple diagram or picture can help you to explain your point of view, after all "a picture is worth a thousand words;" and,

h. **practice aloud and rehearse** in front of family and friends. Practice makes perfect – it will also give you confidence. Revise your speech as required during your practices.

PRESENTATION

Here are some additional tips and hints for when you are speaking:

a. is the audience comfortable and can they see you? Is the room set up the way you like it? If not, then change it if you can;

b. write the main points of your speech out on a small card so that you can refer to it in case you forget the information, or what you were going to say next. Hold this card at your side or back and do not read from it for the whole speech;

c. be yourself. Your audience will forgive your nervousness, but they will be turned off by false modesty or bravado;

d. if you feel nervous do not apologize to the audience for it, they may not have noticed before and thought that you were doing fine. Do not fidget or pace;

e. make eye contact with the members of your audience and keep each person engaged in your speech;

f. take your time and use visual aids to help explain your points; and,

g. ask questions to the audience to see if you are making your point, and to keep them interested in your topic.

To become a good public speaker you must speak often. Listen to other people and remember the things that you liked about their speech. Did they make you laugh? Were you interested the whole way through? Think about what methods they used to keep you listening and employ those methods in your next speech. No matter how long or short your speech it can have a life long effect on people. Choose words that will have the greatest impact on your audience.

EO 410.02: TALK FOR THREE MINUTES ON A TOPIC OF THE CADET'S CHOICE

The three minute speech will be assessed using the following factors:

Critical Factors
Did the cadet…
1. select and limit the subject of the speech?
2. determine the purpose of the speech?
3. analyse the audience and occasion?
4. gather together enough data/information?
5. outline the material?
6. develop an introduction, body and conclusion?
7. plan visual aids?
8. show evidence of having rehearsed the speech?
9. did the audience enjoy the speech?

EO 410.03: LIST THE WAYS IN WHICH TO AVOID STAGE FRIGHT

Personal appearance: Satisfy yourself that your appearance is of a high standard. If you are assured before you start, you are not likely to be concerned about it once you have begun.

Memorize the opening sentence: This will boost your confidence, and give you a push start. This will also give you time to look and make eye contact with audience members. You will be concentrating so much you will forget about your stage fright.

Breathe deeply: This will help you relieve tension. Try to relax your shoulder muscles otherwise they will make your neck stiff and you will become uncomfortable.

Believe in yourself: Also the importance of your speech. The audience wants to know everything in your speech, because you believe in your message.

Prepare your speech: Preparation and practice are one of the best ways to help with your speech and stage fright. The value of practicing until you get it right cannot be underestimated. Try out your speech on friends and relatives before you have to present it.

Pick out a friendly face: It will help make you feel more comfortable. You may have some people who are just not interested in your speech so do not worry about if they looked bored. Just talk to the people who are interested.

Voice: A speaker's voice can mean the difference between a good speech and a bad speech. Practice moderating your pitch, volume, rate of speech, pronunciation, and pauses. Get a friend to listen to you and mark down the good and bad points about your voice presentation.

A speaker's voice is quite possibly the most important aspect of any speech. It must do most of the communicating and hold everyone's attention. As such, it is very important to spend time developing your speaking voice just as you would spend time developing your drill voice. The following paragraphs list the four characteristics of voice with which you should be concerned. Voice exercises are included with each of the characteristics.

Voice clarity is the first characteristic that you should practise. What follows is a series of exercises designed to help you improve your voice

clarity. Read each of the sentences aloud three times while listening for clarity in the words. Pronounce each syllable of each word:

a. Think the thought through till you find the truth;
b. The thunderstorm came either from the north or the south;
c. This is the third time she has lost the thimble;
d. The singer sang English songs in Springfield and Birmingham;
e. The spy spoke softly to the policeman;
f. An education brings its greatest pleasure in one's future. This is often the vision that youth cannot see; and,
g. He brought the thin bone home, hoping to find his dog.

Voice expressiveness is perhaps the characteristic with which most people have some difficulty. As Canadians, we tend to have a very flat and monotone sound to our voice. We place little effort into speaking with emphasis. Read the following sentences and try to read them aloud with as much expressiveness as possible:

a. He ran and ran and ran. His heart pounded with the pressure of a thousand cannons. Sweat poured down the front of his face in an endless stream. Could he make it? Would his body stand the strain? Was there a chance that he would see her again?;
b. War is hell;
c. The vast openness of the Prairies stood before her. The air was silent; the coolness of the evening crept over her. The sun slid silently beneath the horizon in a blaze of orange glow; and,
d. The tires began to give way. The all too familiar screeching began and could be heard above the noise of the thunderous engines. The driver had pushed too hard; he had wanted too much. The car began to drift sideways to the track. Correction came too late; disaster struck!

The human voice has a tremendous range of sounds that it can create. It is this range that helps you to add expressiveness to your voice. However, not all tones are pleasing to the ear or easy to understand in a speech. A voice that is pitched too high leaves little room for further expressiveness upwards and is irritating. A voice that is pitched too low is soothing to listen to but often quieter as well. This may mean that the people in the back may have some difficulty hearing your words.

How do you tell if your voice is pitched just right? Radio announcers and singers have used the following trick for years. With your hand, push your ear forward and press it against your head so that it is almost closed. While holding it shut, speak each of the sentences aloud:

a. Now is the time for all good men to come to the aid of the party.
b. The only difference between a rut and a grave is that a rut is deeper.
c. The exotic executive explained exactly how "x" times "x" can equal "x" plus "x".

Notice the tone of voice that you have and whether you liked it. Try the sentences again and lower your voice and see if there is a difference. Find the tone that you like best; chances are that others will also like the way it sounds.

The last voice characteristic is that of voice speed. By speaking more slowly, you avoid aspirated pauses and gain more cleanly enunciated words. The technique for learning to slow down the rate of speech is called the whisper technique. A whisper can be heard at a great distance if you mouth each whispered word cleanly, clearly and separately. Make exaggerated use of your mouth, lips and tongue. Practise this technique with a buddy standing 10 m away. Read a sentence from a book and slow down each word until the other person can hear you clearly. Perform this drill at least three full times.

EO 410.04: TALK FOR FIVE MINUTES ON A SUBJECT OF THE CADET'S CHOICE

Subject: Choose a subject that is reasonable to talk about in five minutes. Newspapers are great examples of how a large story or subject is broken down into short sections of information to keep people's interest.

Introduction: Who are you? Why is what you are going to talk about important or interesting to the audience – how will they use this information in their life? Will your audience have an opportunity to ask questions at the end? Will there be a test? Tell a joke.

Body: Most people ca not remember more than 7 new things at once. Ideally you could pick 3 or 4 main points and discuss each one briefly.

Conclusion: Summarize your main points, ask questions and answer ones from your audience. Always finish with a positive statement.

The five minute speech will be assessed using the following critical factors:

Critical Factors
Did the cadet…
1. select and limit the subject of the speech?
2. determine the purpose of the speech?
3. analyse the audience and occasion?
4. gather together enough data/information?
5. outline the material?
6. develop an introduction, body and conclusion?
7. plan visual aids?
8. show evidence of having rehearsed the speech?

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Leadership 411

PO 411 LEADERSHIP

EO	DESCRIPTION	PAGE
01	Carry out the duties of a Team Member	11-2
02	Discuss qualities of a leader	11-4
03	Discuss morale and esprit de corps	11-7
04	List 10 Principles of leadership	11-11
05	Define the terms leadership, management and command	11-14
06	List the three styles of leadership	11-17
07	Describe the process of communication	11-23
08	Supervise a cadet activity	11-30
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INTRODUCTION

Army Cadets have always prided themselves on their ability to demonstrate good leadership. This is a skill that will serve you well all your life, regardless of the career that you might choose. Good leadership is not always easy to demonstrate because it requires an extra effort on your behalf. Respect your teammates, and work hard to earn their respect.



EO 411.01: CARRY OUT THE DUTIES OF A TEAM MEMBER

Duties of a team member are:

a. comply with rules and orders;
b. make responsible decisions for your own (and your teammates') safety;
c. maintain good personal habits and manners;
d. admit your mistakes and learn from experience;
e. cooperate with others and work as a member of a team;
f. accept constructive criticism;
g. take care of all personal and group equipment – repair or report items of equipment and clothing when they break or become damaged; and,
h. encourage your teammates.

TEAMWORK

Through your cadet years you will develop a sense of teamwork, trust and friendship. Simply put, "TEAM" means:

T – Together
E – Everyone
A – Accomplishes
M – More

In cadets there are lots of tasks and responsibilities that everyone has to do. You may need to rely on your teammates or staff to help complete a task. You should lend a hand freely, and expect that others will help you when you need it.

Being a good team member is the first step in becoming a leader. Your leaders and instructors have been where you are today. Trust their experience and work on your skills so you can become a good leader.

Be honest with yourself, and your teammates, about your personal limits – things you can not or will not do. Do not try to hide behind foolish or misleading behaviour. Accept your teammates' limits, but be encouraging and supportive to try to get them to improve. Never resort to violent or vindictive behaviour, and never leave a teammate behind.

Be patient and understanding when things go wrong, when people make mistakes, or when plans change at the last minute. Expect the unexpected.

Making responsible decisions means doing the right thing even when no one is watching.

Leadership skills start with the development of communication, interpersonal and active listening skills:

a. communication skills – speak clearly and concisely, look at the person you are in conversation with, and listen to what they have to say – do not interrupt;
b. interpersonal skills – involve yourself with people and try to build an understanding of their feelings, experiences and behaviours; and,
c. active listeners CARE:

C – concentrate on the person, do not let yourself be distracted;
A – acknowledge, let them know you are listening;
R – respond, paraphrase back what you think they are saying, and ask questions to confirm your understanding; and,
E – empathy – imagine the problem through their eyes.



EO 411.02: DISCUSS THE QUALITIES OF A LEADER

INTRODUCTION

Good leadership does not just happen – it is a product of hard work, experience, and the willingness to keep learning.

To understand the qualities of a good leader, take a moment to think about the qualities that you look for in your leaders. You may expect your leader to:

a. make safe, consistent, objective and reasonable decisions based on experience;
b. be self-confident, and good at the skills you expect them to know;
c. be good at planning, organizing and communicating;
d. be a good teacher and coach;
e. be able to build and develop your team, and inspire the members of your team;
f. be flexible in choosing their style of leadership to match the situation;
g. be honest and trustworthy – demonstrate integrity;
h. be able to anticipate problems and deal with them proactively;
i. be able to solve problems and cope with conflicts or emergencies; and,
j. to respect you.

QUALITIES OF A LEADER

When you lead, give yourself objectives to measure your standard against. Describe yourself using these words:

a. **Honest** – you need to be honest and fair to gain trust;
b. **Responsible** – do the right thing for the team;
c. **Confident** – in yourself, your team and your leader(s);
d. **Enthusiastic** – it will inspire your team;
e. **Dependable** – be there when you are needed;
f. **Patient** – take time for your cadets, answer their questions and ensure they understand;
g. **Decisive** – make a safe and reasonable decision, based on the input of your team, and then carry it out;
h. **Determined** – finish the job;
i. **Loyal** – to your team, yourself, and your leader(s); and,

j. **Courageous** – try something new, stick to your convictions, admit mistakes then correct them, and overcome challenges.

Courage:

"Most parents are proud of their children when they see them on parade at cadet functions, but perhaps none more so than Louise McDow, mother of 17 year-old army cadet Kelly Bennett of 2937 Enfield Legion Royal Canadian Army Cadet Corps in Grand Lake, Nova Scotia. Cadet Bennett has spina bifida and has been in a wheelchair almost since birth. Yet she is an active member of the army cadet corps and participates in most corps activities, including parades, outings and overnight camping trips.

'She's in a wheelchair,' says Louise McDow. 'I thought she'd be better off learning to play the piano. When she was keen to join, I thought she'd quit in two months. But it's been more than five years.'

Despite the challenges of her condition, Cadet Bennett participates fully and enthusiastically in her community. She plays piano, swims, and was named the Easter Seals ambassador for the Abilities Foundation of Nova Scotia after the previous ambassador and her friend, Lance Jenkins of Halifax, died from complications of muscular dystrophy in January 2000. Cadet Bennett has created spina bifida awareness in schools, helped a local scout troop earn disability badges, and babysits children ages seven to ten. She has also been instrumental in helping with the design of a new high school, making access easier for disabled students.

With her picture on area milk cartons, Cadet Bennett is perhaps the most easily recognized teenager in the area, and one that her mother and her fello cadets are proud to call both an inspiration and a friend." – by Michele Boriel.

General Jacques A. Dextraze, a former CDS, wrote, "I believe that there are four qualities that are essential ingredients of successful leadership. These are: loyalty, knowledge, integrity and courage."

Integrity

Cadet Corporal Pierre Compeau from 2784 Governor General Foot Guards Cadet Corps in Ottawa, Ontario, received a $500 registered education savings plan certificate and a $200 cheque from the bank, along with a letter of appreciation from the Ottawa-Carleton Regional Police, after unwittingly becoming involved in the aftermath of a bank robbery in Ottawa, in October 1999. Having seen the two suspects flee the scene after dropping the money, cadet Compeau swallowed his fear of being attacked, scooped up the thousands of dollars and promptly returned the stolen money to the bank.

The Star of Courage

Cadet RSM Paul Benner of 2472- 15th Field Regiment Royal Canadian Artillery Cadet Corps in Vancouver, B.C. was posthumously awarded the Star of Courage at a Quebec City ceremony in November 1996. Cadet Benner saved the life of his girlfriend without any regard for his own safety, by pushing her out of the path of an oncoming train. Cadet Benner is the only cadet to ever receive the Star of Courage.

Cadet Award for Bravery

"On May 1986 cadet Michael Monette, 13 years of age of 2407 RCACC Blind River, Ontario at great personal risk, imperiled his life to rescue Mr. Paul Lacroix, 56, a non-swimmer, who was in distress after his canoe had upset while fishing in a deep canal. Cadet Monette displayed great courage and presence of mind when he responded to Mr. Lacroix's cries for help, by diving into the canal, uprighting the canoe, helping the victim to climb into the canoe, and towing the canoe back to shore. Through his quick and determined response, Cadet Monette undoubtedly saved the life of Mr. Lacroix. This act is recognized by the Canadian Forces and by his community as being one of exceptional bravery and is in keeping with the highest traditions of the Royal Canadian Army Cadets." – the Army Cadet League Journal.

EXPERIENCE AND EARNING RESPECT

Experience is a valuable asset of a good leader. Endeavour to gain a wide variety of experiences, even if they are in non-cadet areas. Every

lesson you learn in leadership will enable you to become more confident. Experience will not always give you the right answer, but it will help you understand that people are more important than tasks.

Be yourself – you can not be a good leader by trying to be someone else. Each person, because of their different background, will develop a style of their own. You need yours.

Quite often it is the team that selects their leader – choosing someone who best demonstrates the qualities they are looking for. It is very difficult for other people to take a leadership position if they have not earned it from their team.

> "The leader . . . accepts the burdens of others and, by doing so, earns their gratitude and the right to lead them."
>
> *Morale in Battle: Analysis*
> by Field-Marshall Montgomery,
> Commander in Chief,
> British Army of the Rhine (April 1946).

Leaders must demonstrate the will to accept the same risks and inconveniences that they ask of their team. They show this by sharing in the workload, eating the same food, carrying the same load, completing the same tasks, sleeping in similar shelters, etc. Leaders can further this sharing approach through simple acts like eating only after ensuring all team members have something to eat, checking team members are safe and secure before going to sleep, and being the last person standing in the rain when there is not enough room under the tarp.

EO 411.03: DISCUSS MORALE AND ESPRIT DE CORPS

Morale is a state of mind. It directly influences the performance and proficiency of individuals and therefore, that of the organization itself. Esprit de corps is team spirit, and in the simplest terms represents one's pride in belonging to a particular organization or unit.

Calling a group a team does not make it one.



MORALE

The essence of high morale in a group is a sense of well being amongst the individual members. In a cadet organization it appears as:

a. **common purpose** – members make decisions that benefit the team;
b. **leadership** – leaders are trusted and experienced;
c. **discipline** – the team works well together, and events occur as planned;
d. **self-respect** – individuals respect themselves and others;
e. **pride** – individuals present themselves well and feel a strong bond to the team goals;
f. **comradeship** – members enjoy participating in the activities of the team;
g. **mutual confidence** – members trust their peers;
h. **cadet's well being** – leaders take care of their team members; and,
i. **comfort and welfare** – the environment is one where members can easily learn and grow.

Morale cannot exist where there is a sense of futility – a sense that success cannot be achieved. Every team member must be given the feeling that they are key to the success of the team, and that they may one day be a leader of that team.

When an individual member of the team is ignored, feels isolated or unsupported, they are likely to quit, or seek attention for themselves thereby creating new and greater problems for the team. A common practice in weak teams is to take on the attitude that members who are

struggling should be removed from the team – this in fact only serves to demoralize the team. Weak members need counseling, motivation and support, and their teammates need to be shown that problems are overcome by effort and teamwork, not by abandoning a person. A person that joins a cadet team must always be valued as a volunteer. Team members should only be removed when they have acted maliciously against the team or corps.

From the outset, invest in the core values and practices of the team. Expend time and energy to create the team environment from the very start – because, if you do not, the team will create their own core values. Never place your team or a teammate in a position where they are forced to compromise their values, or the values of the team. No member should be asked to act against the values and morals of their culture or religion.

Do not allow contradictory instructions to reach your team. Ensure you know what your leaders want (what their aim is) and then give your team instructions.

Coping with conflicts – make every effort to solve, or at least address, issues and problems when they arise so that team members do not harbour resentments. Left on their own, these problems will degrade the team morale, and will show up in times of stress or emergency. All team members must abide by the same rules.

You can avoid or lessen conflicts by:

a. starting early to earn trust and respect, and develop good teamwork;
b. keeping an open mind for other's opinions and attitudes;
c. listening and confirming what you heard;
d. collecting ideas from the group instead of arguing or debating;
e. avoiding compromises that only delay an inevitable harder decision;
f. getting all the team involved in creating a solution;
g. controlling your own emotions so that you can inspire others to be calm and cooperative; and,
h. making and following a plan to solve the issue.

ESPRIT DE CORPS

Esprit de corps exists only in an environment where all team members feel involved and included.

Some easy ways to build team spirit are:

a. ensure everyone knows each other, and always introduce new members to the team;
b. build trust by delegating small responsibilities to team members;
c. praise good performance, and correct errors fairly and immediately;
d. watch for, and fix, small problems before they become big;
e. take care of your team members;
f. share your experience;
g. do activities together and consciously include every member; and,
h. find some common bonds – things that members may have in common – and create new common experiences (new challenges, team songs, stories, sayings, etc.).

Attitude checks – are an excellent way for your group to understand each other and their emotions better. For a new team, or a team struggling with esprit de corps, they are a way to build trust, motivate members and boost morale. For a solid team, they are a way to share emotional experience and learn from each other. The typical attitude checks are, but not limited to:

a. one word attitude check – each member says one word to describe their feelings/attitude at the moment. This is a good start for new members and teams, and could lead into team slogans, mottos or sayings where the team responds in unison;
b. anonymous attitude check – where each member writes down their feelings/attitude on a piece of paper. The papers are then collected, redistributed, and read aloud in random order. This can assist a team going through a difficult challenge; and,
c. classic attitude check, or ‘sharing circle’ – where the team sits together and each member is given the opportunity to tell the team their feelings and thoughts. There is no limit on time or topic. This is extremely effective with an experienced team, and is an activity that needs to be developed slowly. Every

effort must be made to respect a members decision not to speak if that is their choice.

Common purpose is a team attitude that develops within a team that works together to succeed when challenged. Individual interests are replaced by an overwhelming motivation towards team goals.



EO 411.04: LIST THE 10 PRINCIPLES OF LEADERSHIP

INTRODUCTION

Leadership is a process of focusing and motivating, of looking forward and reflecting, and of making decisions. A leader is partly what they try to be, and partly what they are perceived as. Because leadership is an art form rather that a science, there are no true rules – simply principles to guide a leader.

1. **Lead by setting a good example for others to follow.** The only way to earn respect from the team is for them to first accept that you are tangible part of the team, you share their goals, and that

you are acting in their interest. You can only do this by being there, experiencing the challenges with them (e.g. if your cadets are marching in the rain, you too should be in the rain). Also, a majority of the leadership lessons you will teach will come as the result of your cadets imitating you.

2. **Get to know the cadets in your charge and look after their welfare.** You should find out about your cadets, their name, school and hobbies. You should also find out some professional information such as appointments, summer camp qualifications, leadership ability and / or potential. Then use this knowledge to guide them in their cadet careers, and be there when they need your advice. You will also find that the skills and knowledge the members of the team possess will be beneficial to accomplishing team goals – and your knowledge of your team members will assist you in selecting people for tasks, etc.

3. **Develop the leadership potential from among the cadets in your charge.** Each team member represents a long-term investment of the corps. You want to enhance their abilities as leaders so that they feel integral and important to the success of the team. By working to improve the individual's self-confidence and initiative, you will increase the overall performance of your team. In the end, you want to have them trained enough to take over your position when the time comes.

4. **Make sound and timely decisions.** Be aware of the situation and act accordingly –swiftly in situations of danger, patiently in safe and stress-free occasions. Consider the positive and negative factors, examine your options, draft a plan, and allow as much feedback on your plan as possible from team members. Follow through with the plan. In situations of danger, your team members will expect that you, as their leader, will be composed, considerate, and confident in your actions and decisions.

5. **Train the cadets to work together as a team to complete a task.** Teamwork takes time and energy to instill and develop. Communication, cooperation and a sense of common purpose will make each challenge more rewarding, and it will create opportunities not accessible to weaker teams. Adopt goals for the team that are agreed to by the team members.

6. **Communicate your ideas and thoughts clearly.** Be brief and use terms and phrases that will be understood by all team members. For complicated instructions, prepare yourself before going in front of the team. Have your team take notes and question them on their assigned duties or tasks. Give them an opportunity to ask questions of their own. When you give directions ensure everyone knows what your aim is.

7. **Keep the cadets informed of all activities and developments as they happen.** Keeping your cadets informed will make them feel part of the team. If everyone knows exactly what is going on, they will be more comfortable following orders, and more adaptable to changes.

8. **Take personal initiatives.** Bring forward your ideas, and those of your team, to your leaders. Be familiar with your duties and responsibilities and act on them within your ability.

9. **Learn to recognize your personal strengths and weaknesses**. Only attempt to lead activities that you are confident in your skills and knowledge. Get extra training if you need and always allow time for your own development and to practice difficult skills before a challenging activity. Do not afraid to admit that you can not do something, or that you need help. Your team will appreciate your honesty.

10. **Treat the cadets as you would like to be treated yourself.** Being abusive or cruel, swearing, losing your temper or self-control, or simply being unpleasant are all signs that you are losing your ability to lead. Take a moment to compose yourself, and deal with the situation with a calm and fair attitude. Remember what it was like to be a team member and respect that mistakes will happen.

Part of the responsibility of being a good leader is to establish and keep to ground rules. People need to know from the beginning what they can and can not do. By being a leader first then a friend it will be much easier to do than go from a friend to their leader. If you gain your teammates respect, they will follow you and friendship will come. Remember, making everyone part of the group is a result of you being a great leader.



EO 411.05: DEFINE THE TERMS LEADERSHIP, MANAGEMENT, AND COMMAND,

INTRODUCTION

Leadership, Management and Command – these terms are universally used, but definitions vary between the civilian and military worlds. Army Cadets use the definitions from the Canadian Forces (CF) as a basis of understanding how these terms, and what they represent, are put into action in cadet activities.

In school, most subjects are classified into two categories; the **arts** and the **sciences.** The arts are based on a personal interpretation of facts and general principles. The sciences are based on laws and equations that are accurate time and time again. Leadership and Management can be placed in these two categories respectively.

CF DEFINITIONS

Leadership: The art of influencing human behavior in order to accomplish a task in the manner desired by the leader.

Management: The science of employing human resources and material in the most economical and effective accomplishment of a task.

Command: The lawful authority that a superior exerts over their followers by virtue of their rank or appointment.

LEADERSHIP

The CF is a task-oriented organization – i.e. they exist to carry out a duty that is broadly understood by each member. So, a leadership model that ties directly into accomplishing a task is suitable. The Royal Canadian Army Cadets, organized on the CF model, can also find value in associating leadership with accomplishment.

Cadet training and activities may not always have a definable task (i.e. the goals may be in the areas of creating good citizens, choosing a healthy lifestyle, offering life changing experiences, etc). Leadership in Army Cadets may be further referred to as the art of influencing individuals and teams to accomplish shared goals with a competency and motivation they would not have achieved on their own. Leadership includes aspects of motivating, coaching, counseling, communicating, acting, and debriefing.

MANAGEMENT

Even though managers and leaders are often separated in the civilian world, the two are integral in the CF. In Army Cadets as well, the two roles are mutually inclusive. Previously we discussed that people expect their leaders to be good organizers and planners. Managers must balance efficiency and effectiveness, the cost of action versus inaction, and the suitability of the resources for the task at hand. Management includes aspects of planning, preparation, scheduling, communicating, coordinating, and studying.

The management of human resources is closely associated with leadership. Not only are individuals and teams resources available to accomplish tasks, they are people who have needs and concerns, strengths and weaknesses. It is in this area that management and leadership become dual responsibilities of a cadet leader.

COMMAND,

While officers of the Cadet Instructors Cadre are responsible to the National Defence Act and subject to the Code of Military Discipline, cadets are not. CIC officers also carry further legal responsibilities for the cadets under their charge similar to other youth leaders or guardians.

Cadets who lead other cadets do not have a legal basis for their position of command, simply an institutional or traditional one. A cadet leader can rely on several sources of 'power' or substance for their command:

a. **referent power** – when you are admired, identified with, or valued by group members, they are more likely to agree with you, support your opinions, and follow you;
b. **legitimate power** – when a young person joins cadets they implicitly accept the authority of command of cadet leaders. This is defined by your rank and position – an indication of the level of support given to you by your Commanding Officer;
c. **expert power** – the more skill, knowledge and experience you have will generate the respect of your team and their acceptance of you as leader;
d. **reward power** – is based in your ability to, and your perceived predisposition to, praise and reward team members for positive behaviour. Your team will respect (and then learn to expect) appropriate rewards, and this expectation gives you strength to influence their behaviour; and,
e. **coercive power** – is based on your ability to withdraw rewards or opportunities, and in some cases enforce disciplinary action. A leader who relies heavily on this power will soon nullify its effect – their team will lower their expectations of reward and be less influenced by negative action.

THREE IN ONE

Cadet leaders will employ elements of leadership and management within the authority of their command position. This combination is seamless – the two methods are used where appropriate to move the team towards success. Identify the elements and issues of leadership, management and command in this scenario:

You are a Sergeant, and the leader on a difficult hike. It's getting late. Your slowest hiker is Cadet J. You stop the group and direct Cpl X to divide up the heavier contents of Cadet J's pack to the other team members. You ask Cadet J how he's feeling, and compliment him on the effort he has made so far, reminding him that there is only a short distance to go. You send a small fast team forward to get supper started at the bivouac site under the leadership of a competent team member. Rain starts falling and MCpl W criticizes your choice of action in front of the team.

What leadership decisions did you make? Which ones where management decisions? What powers of command are available to you?

EO 411.06: THREE STYLES OF LEADERSHIP

INTRODUCTION

A leadership style is the approach that a leader adopts in the interest of getting the job done. Style is portrayed as a range of approaches based on how much authority a leader exercises and how free team members are to contribute to the situation. Leadership styles are adapted to the personality of the individual leader and, as a result, you can get many interpretations of the three styles of leadership. No one uses one style all the time – leaders should change their approach depending on the people involved and the situation.

The factors involved in the situation are virtually limitless, however they usually are associated with:

a. the elements of perceived risk, actual danger, or emergency;
b. time considerations – due to schedule, identified risk, or other conditions (e.g. amount of daylight left, approaching storm, availability of a resource, etc.);
c. how confident and competent you are in the skills and knowledge required by the task or challenge you are facing;
d. the competency, experience, morale and other factors associated with the team and/or members of the team;
e. the opportunity for effective communication from the leader to the team, and vice versa;

f. the complexity of a task; and,
g. the size and scope of the task (e.g. the number of people, number of sub-tasks, number of levels of command, etc.).

Risk and fear – are two of the most powerful situational factors. A leader needs to recognize both the signs of these factors as well as estimate the results of them on the actions and reactions of the team. Accepting and adapting for these factors will affect the leader's choice in leadership styles.

Confusion, fatigue, lethargy and boredom – are destructive mental factors in morale and esprit de corps and will require the choice of a more involved leadership style. Ignoring the signs of these when choosing a style could be disastrous.

Type of organization – will affect your choice of styles as well. The organization must be ready and able to accept a leadership style (e.g. a group of recruits may not be able to handle a leadership style where they have to make all decisions as a team). Also, Cadet Corps and Summer Training Centres have a history of leadership style that team members will have become accustomed to. These styles may be appropriate or not, but you will have to be aware of this history in order to introduce your style to the team.

THE AUTHORITATIVE STYLE

The authoritative style of leadership comes from a need to impose order on a situation where the team or individuals would be unable (or are unwilling) to impose the order themselves. The fundamental rule with this approach is to use only as much direction as is required by the situation. The situations where you could employ this style are:

a. situations of danger or emergencies;
b. when you require a high level of productivity from an inexperienced team or individual;
c. where the task is important, time is limited, and the team will be placed at risk if they are not successful;
d. passing on important orders or instructions;
e. significant feedback from the team is not required; or,
f. when you are not trying to teach members of the team.

Authoritative leadership is an important tool for leaders, but one that can be abused by adopting it unnecessarily. It is for situations where

simplicity, speed are uniform action are required (e.g. in extreme danger, when time is an over-riding factor, or when large numbers are involved) and where the consequences of poor decisions are severe. Drill commands are a good example of the basic authoritative style. This style does not infer that communication is cut off from the team to the leader. In fact the leader must work even harder to assess and understand the attitudes and ideas of the team members. As with any leadership style, the team must be ready and willing to accept authoritative leadership – and they must trust that the leader is adopting this style for the best interest of the team. Authoritative leadership is perhaps the most difficult style to know when to use. It is like your raincoat, you only put it on when it's raining.

THE PARTICIPATIVE STYLE

The participative approach is a process of personal interaction between a leader and team members. This style has two key elements:

a. the **Persuasive** element – by setting an example, the persuasive leader encourages and inspires cadets to participate in the assigned task; and,
b. the **Developmental** element – this leader instructs, guides, coaches and assists team members in an effort to develop their skills and experience.

In this style the leader may still direct activity, but often with significant feedback from the team as well as an emphasis placed on personal initiative by the members. This approach is most common when working with a new team, or a team that is in a learning situation (especially complex skills or knowledge). A leader may also adopt the participative style when a team seems unlikely to meet its goals, but when the situation is not yet serious enough for the authoritative approach.

The participative approach also enables leaders to demonstrate and instruct behaviours and attitudes. This style is the best opportunity for a leader to get to know their team and it requires a significant amount of two-way communication. It is also helpful in building, or rebuilding trust within a team.



THE FREE-REIN STYLE

The free-rein approach calls for the leader to temporarily withdraw influence, giving the cadets the opportunity to work on their own. This approach is most common with experienced teams carrying out routine activities (e.g. setting up a bivouac site, cooking lunch, organizing for parades, etc.).

The free-rein style greatly benefits self-motivated team members looking for new responsibilities and challenges. Whether tasks are assigned by the leader, or shared by team members, this approach allows an opportunity for the leader to assess the development of leadership skills of team members.

Leaders who adopt this approach do not abdicate their responsibilities for safety or guiding the team towards shared goals. The most common mistake made by leaders adopting this approach is to forget that they are still the leader and may need to step in using another style if the situation warrants it.

CONSCIENTIOUS LEADERSHIP

Cadets are volunteers who have joined a program to learn and experience new things. They may have very different motivation and goals from you, and one style of leadership that works for one cadet may not work for another. Every cadet who joins has a right to be fully

involved in the program and every leader needs to remember that, especially when faced with challenges in leadership.

Conscientious leadership is the willingness to put yourself in another's shoes, to be compassionate, and to accept another's wellbeing as a priority of your own. You can demonstrate this by;

a. seeing things from a team member's point of view;
b. sharing your own experiences and being open and accessible;
c. listening;
d. coaching, motivating and helping;
e. keeping promises and following through with plans;
f. forgiving errors and not prejudicing;
g. not suprising people with bad news – give fair and clear warnings, and make plans for improvement;
h. correcting mistakes with appropriate action; and,
i. acknowledging contributions towards team morale and success – especially from those whose contributions may be few.

Remember – conscientious leadership is an investment in your future .

ETHICAL LEADERSHIP

Ethics is about right and wrong, and doing the right thing. Any action, or lack of action, that affects human beings involves ethics. The principles of ethics are not connected to a particular religion, or political affiliation, but to what we understand as the foundations of Canadian society in general. The Canadian Charter of Rights and Freedoms is a good example of the ethical structure of the Canadian democratic system. The ethical principles of equality, fairness, mutual respect and human rights are what make our society function.

As a leader in the Royal Canadian Army Cadets, you have a responsibility to act within these ethical guidelines. An 'ethical dilemma' occurs when:

a. you are unsure of the right thing to do;
b. two or more of your values may be in conflict, e.g. honesty vs. loyalty; and/or,
c. harm (physical or emotional) may be caused , no matter what you do.

To help solve an ethical dilemma:

a. consider your obligations and responsibilities as a leader;

b. consider all the options;
c. choose the best option that considers:
 (1) the rules that exist;
 (2) the consequences of your action/inaction;
 (3) the values of conscientious leadership; and,
 (4) ethical values;
d. talk to others if you need advice or help; and then,
e. accept responsibility for your decision/action.

Remember: you are not required to follow an order you know is unlawful, and you have a responsibility to speak out or act when you see unethical behaviour.

LEADER ORIENTATION

Generally speaking, leaders tend to be 'task-oriented' (concerned with accomplishing a task) or 'relationship oriented' (concerned with developing and improving morale and team interaction). In Army cadet training however, as we have discussed above, a leader should not adopt a leadership style solely because of their own personal orientation, but by understanding and developing the shared goals of the team. Leaders select a style based on the factors effecting the situation, balancing team goals and personal orientation. The end result is that a leader will always start from a certain orientation, and the situation will move them one way or another on the leadership style spectrum.

For example, where conditions are favourable (e.g. good weather, low risk, confident leader, cohesive and capable team, clear goal, etc.), leaders will likely move towards the participative and then free rein styles. When the situation contains risk, or other unfavourable conditions, leaders will tend to move towards a participative and then authoritative approach.

What this means to you is that once you understand your own orientation as a leader, you can establish strategies to help you make appropriate choices in leadership style. For example, if you know you have an orientation to the free-rein style, and you know that would be a dramatic switch for you to suddenly adopt an authoritative approach, you may need to be more vigilant of upcoming risks and areas of stress so that you can adopt a participative style sooner. In the same way, a leader who is only comfortable in the authoritative role may have to

consciously remind themselves to give the team members more opportunities to make decisions, even though the leader may only ever reach a participative style.

LEADER AS MANAGER

A leader must learn to manage:

a. their time – e.g. be on time for tasks, do not get caught out after dark in dangerous terrain, maintain a reasonable schedule, etc;
b. team safety – safe environment, safe behaviour, safe activities and acceptable risks;
c. their team – use the right people for the right job at the right time; and,
d. their equipment – get the right tool for the job in place on time, keep kit in working order, clean and ready for use.

EO 411.07: PROCESS OF COMMUNICATION

INTRODUCTION

Leaders depend on effective communication to express direction and ideas, and collect feedback. The game ‘Broken telephone’ is a good model of the challenges of communication. A group sits in a circle and whispers a detailed message from one person to the next – the last person in the line usually ends up with a different version of the message than the first person started with. Despite everyone's best effort, the message changed because it was not completely understood as it passed from person to person.



EFFECTIVE COMMUNICATION

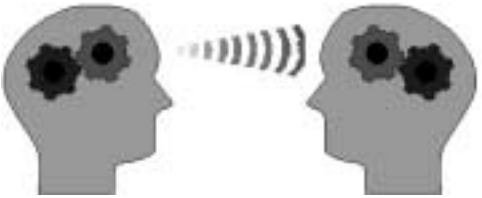
Communication is a process of sharing information between two or more people. The information and the method of sharing can range from simple to complex. Effective communication occurs when:

a. the originator expresses what they intended; and,
b. the recipient of the information alters their actions or beliefs on the basis of what the originator meant.

Behavioural change may be a s simple as disagreeing with the sender, or as complex as overcoming a fear. The information conveyed may be ideas, actions or emotions (or a combination), and the method of conveying them may be audio, visual or tactile (or a combination). Audio transmission is usually via the human voice, or in some circumstances written language. Visual transmission can include everything from pictures to body language. Tactile transmission is the act of doing, receiving information by touching or participating.

As we know, communication is far from being exact. A message sent by you is rarely received exactly the way that you meant it. There are several factors that affect human communication:

a. what is meant by the originator;
b. what is understood by the recipient;
c. barriers to communication;
d. the result of communication; and,
e. feedback.



MIND OF THE ORIGINATOR

As a leader, you are required to communicate with your cadets. In most cases you and your cadets will communicate your ideas orally, although you will employ other methods consciously or unconsciously.

Communication begins with you generating a concept in your head. This concept is based on past experience and learning, the influence of the current situation, and your ability to formulate new concepts. To communicate this concept to another person, you have to translate it into a combination of words, actions, and/or emotions.

Spoken (and written) communication contains many aspects that affect the presentation of your ideas, such as the tone of your voice. You can communicate respect, contempt, indifference or approval in the tone of your voice in addition to your message. You can transmit your own personal feelings in your message such as alarm, satisfaction, love or disappointment. The actual content of your message that you wish to communicate can vary tremendously from a request for assistance to instructions on how to complete a task. The content can be expressed using language that is complex, very simple or highly technical. The last of the aspects of oral communication that can affect your message is your intent. Are you trying to convince someone? Are you trying to motivate a group or are you trying to promote understanding of a subject?

Your actions and the visual clues you provide also positively effect transmission. Use you body to help express or clarify your intention, e.g. pointing and saying “Over there.” If you are communicating a skill, have the team follow your actions as you progress through the skill.

Flavour your communication by putting it in context of what you feel is important to the recipient. E.g. explain that a safety check on the air rifle is important because a severe injury could result to a careless user. You

have bargained that the average recipient will be concerned with their own safety and they will listen and remember.

MIND OF THE RECIPIENT

Once you have sent your message, it is up to the recipient to receive your message. The recipient decodes your transmission, relying on their ability to understand the language of the information, as well as their interpretation of the visual ands tactile information.

There are several aspects that effect the efficiency of receiving your message. For example, is the recipient ready to listen? Is the recipient's mind open and is the recipient concentrating on what you are saying? Once the recipient has heard your message, did the recipient perceive your meaning? Comprehension of your message is important in its successful completion. Lastly, the recipient must be able to recall the information that you sent.

The recipient will take your information and process it like you did when you originally received it. They will understand your information in context of their past learning and experience, and will judge its value based on their own scale of importance. They will then act or adjust their beliefs based on their judgement of your information.

BARRIERS TO COMMUNICATION

In between the originator and the recipient are barriers to communication. These barriers must be overcome in order to get your message across effectively. These barriers may be:

a. emotional barriers – worry, fear and mistrust can take away from your message. A recipient with strong negative emotions about the originator will have difficulty processing any message sent;
b. prejudicial barriers – where the originator or recipient misjudges the intent, or the ability to understand, of the other;
c. misinterpretation barriers – where the originator or recipient misinterpret the meaning of the message, including poor encoding by originator, or incorrect assumptions of the recipient’s values;
d. mixed message barriers – where the body language, tone of voice, or other factors create a message that opposes the spoken words of the originator’s message;

e. vocabulary barriers – where the originator uses the incorrect vocabulary for what they are trying to express, or the recipient doesn't understand the vocabulary used. Words often have more that one meaning, e.g. there are no less than 47 contexts for the word **face** and 73 contexts for the word **round.** If the recipient is not sure of which meaning was intended, the message will get lost;
f. overload barriers – where the recipient has taken in too much new information and cannot process the message; and,
g. noise barriers – a distracted or inattentive listener will reduce the understanding and recall of the message because only parts of the message were heard. Listening requires an environment free of distractions and other physical and psychological noise, and it is easy to become distracted when listening. 'Noise' is one of the worst barriers to communication.

RESULTS AND FEEDBACK

Result – once the message has been received and understood, the recipient may then change their behaviour or beliefs, or they may disagree with the message, or offer alternate solutions, etc. The originator can monitor the success of their communication by watching for these results. This is the most obvious indication of the message being received. The originator must give appropriate time for the message to be processed, evaluated and valued, and then acted on. The message could be repeated, re-worded and repeated, or adjusted if the results of the message indicate a miscommunication.

Feedback – immediate results may not uncover problems with communication. The originator must continue to evaluate the effectiveness of their communication. Feedback is the best method of continuing the communication process. While the recipient may offer some initial feedback – "I do not understand what you are saying!" or "You want me to do what?" – or may act in a different manner than intended, it is usually beneficial for the originator to draw feedback from the recipient(s). This can be done by asking them to repeat to you what was said, what task was assigned to them, or by other questions that will show that they understood and are ready to act.

Often the feedback will illustrate a requirement for parts or all of the message to be explained or re-worded. It is the responsibility of the

leader to ensure that communications are clear and understood by drawing feedback from the cadets, not the cadets to volunteer feedback.

Communication is a complex process with many pitfalls and difficulties. As leader, it is important to remember just how complicated human communication can become for even the simplest of thoughts. It becomes even more complicated when you speak to a large group of people because you multiply the number of times that your message can get lost in the shuffle.

Guidelines for effective communication:

a. make sure your message is accurate and complete – up-to-date and contains correct information;
b. make sure the information is being communicated to the people that need it;
c. give the recipient enough time to process the message before you expect action;
d. finish one message before beginning another;
e. be friendly and communicate in a personal manner;
f. be a good listener, and draw feedback from recipients; and,
g. take responsibility to make sure your meaning and intent were understood.

GIVING AND RECEIVING ORDERS

An ‘order’ is a very formal format of communication. The are traditionally written or verbal. An order is the clearest, most direct communication of information related to the accomplishment of a task from a leader to a team or individual. An order carries with it the weight of the authority of the leader.

There are four types of orders:

1. **Direct order** – is specific, concise and definite. The recipient of a legal direct order is obliged to respond without hesitation or indecision. Direct orders are used when the leader has determined that there are no other viable options for action. Drill commands are an example of direct orders.
2. **Request** – is a softened direct order where the leader is expressing their will, however there is some latitude for the recipient to use their initiative to accomplish the instruction. E.g. “Cadet G, can you help Cpl R with that stove?”

3. **Implied order** – relies on the initiative, experience, confidence and knowledge of the recipient to accomplish the instruction. It is most commonly used with experienced team members when the leader gives the order, and a reasonable person understands that there are other orders implied but not spoken. E.g. “Sgt H, set the bivouac site on that edge of the clearing.” – the implied orders are that all rules for minimum impact and bivouac sites will be followed, and Sgt H understands that she is responsible to you to ensure that the task is carried out.
4. **Call for volunteers** – is used to give team members an opportunity to feel integral to the success of the task, or to improve team members’ sense of responsibility to be involved.

When you give orders:

a. Plan – the content of the order. Be clear, concise, to the point, and follow a chronological order avoid unnecessary information and petty instructions;
b. Deliver – the order clearly, in an orderly fashion, and directly to the member or team that requires the information. Ensure the recipient knows what your aim is, what level of quality and quantity is expected, and what the factors of the situation are;
c. Confirm – the order was understood by requesting feedback and observing results; and,
d. Evaluate – the effectiveness of your order giving style and content by observing results, listening to feedback and asking peers to critique your style. Adjust your order-giving style to improve for the next time.

To receive orders at a scheduled orders session, arrive early to read background information, examine marked maps, prepare yourself, receive handouts, etc.:

a. listen to the entire instruction;
b. write down details, and start a list of questions you want to ask at the end;
c. confirm the aim of the activity;
d. confirm the details of tasks or responsibilities assigned to you;
e. confirm and write down tasks and responsibilities of people you will have to deal with during the activity;
f. confirm critical timings, emergency and supervisory plans;
g. confirm travel orders;
h. confirm resource requirements;
i. confirm the method of communications;

j. confirm the chain of command; and,
k. confirm that your watch is sychronized to the watch of the commander.

When receiving an order, listen to the entire order before asking questions. Interpret the type of order it is and respond accordingly. If you feel an order is inappropriate or illegal:

a. ask questions to clarify the originator's intent; or,
b. **refuse it** if in your opinion **the safety or rights of you or your team are in immediate peril** – report to another adult leader.

EO 411.08: SUPERVISE A CADET ACTIVITY

INTRODUCTION

Supervision is one of the most important responsibilities of cadet leaders. Supervisors may be responsible to oversee an area, an activity, a group or a specific individual. While supervision may be required for assessment or instruction of skills, efficient or effective management of personnel or ensuring compliance with rules, its most important role is **safety**. Supervision is not only a leadership responsibility, it is also a legal responsibility.

For clarity and precise instruction, supervision can be further modified:

a. **general supervision** – participants are undergoing planned activity, but may not be immediately in view – e.g. on a navigation course with supervisors placed at key points;
b. **close supervision** – participants are in view, and within range of voice signals;
c. **direct supervision** – participants are within 3m; or,
d. **immediate supervision** – participant(s) are within your arms length.

There are seven functions of a supervisor:

1. supervisory plan – is part of the overall plan for the activity, it could be a verbal instruction for a simple supervisory task, or a formal written document for a complex activity (like a weekend exercise). The plan should include a list of responsibilities for supervisors including locations and areas of responsibility, times and dates, schedule of patrols, etc. This plan ensures that no one is left completely unsupervised;

2. behaviour management – includes discipline, control and direction of participants;
3. rules and regulations – a supervisor must have a clear understanding of the rules and regulations concerning the activity they are supervising;
4. identifying dangerous situations and conditions – the supervisor inspects their area, and considers the inherent risks of the activity, before the activity starts. Dangers and risks are communicated to the participants as they arrive. During the activity a supervisor ensures that new or increasing risks are identified and that safety is paramount;
5. security – the supervisor is responsible for the security of people and equipment – ensuring proper use of equipment, avoiding loss or damage, and routine maintenance and cleaning (in most cases);
6. first aid – whether the supervisor carries it out, or ensures that it is carried out by a qualified person is a supervisor's function – also, any required reports required after the fact; and,
7. emergency plan – the supervisor must understand and, when required, implement the emergency plan for the activity.

There is a distinct difference between the terms supervision and inspection. **Supervision** involves observing, directing, and correcting problems if they occur. This is ongoing throughout the task. **Inspection** involves inspecting or verifying the final work for correctness. This is done at the end of the task.



SUPERVISION FOR SAFETY

The supervisor's checklist:

1. Plan ahead – admit that accidents can happen to you and set in place a plan for emergencies – communicate that plan to everyone involved;
2. Search for dangerous conditions and situations – remember that danger is often a combination of conditions (e.g. fatigue, poor planning, ice and steep slopes). Judge an activity based on what the worst possible outcome could be if there was an accident. You can manage the risks of dangerous situations by:
 a. removing elements that contribute to the danger;
 b. avoiding dangerous elements by re-routing, moving training areas, changing the goals or objectives of the activity, or canceling the activity; and,
 c. rate the level of seriousness of the elements and accept that there is a level of risk that is acceptable – anything higher than that level requires removing the danger or altering your activity to avoid it;
3. Monitor the situation – to determine if your original judgement on danger was accurate, and to track new risk conditions;
4. Minimize losses – make choices that will result in the lowest overall loss – e.g. if the choice is save a canoe and equipment trapped in a rapid versus risking a life to get it back, accept the loss of the canoe and equipment. In the event of an accident act immediately to ensure safety and initiate first aid; and,
5. Make appropriate adjustments – if new risks are identified, or an accident happens, go back to your original plan and make the right adjustments – do not continue as if nothing had happened.

Factors that effect safety planning and management:

a. new or unexpected situations – a supervisor who suddenly finds themselves in a new or changed situation (in an unfamiliar training area, suddenly put in charge of a new group, etc) is less able to identify and forecast dangers;
b. relaxed concentration – occurs with fatigue, distraction or carelessness. It is most common immediately after a high stress situation, or after accomplishing a major goal – the supervisor must remain vigilant to new conditions and even to dangers that are known;

c. artificial goals – sometimes supervisors will allow false goals to become more important that safe activity – e.g. insisting on getting to a point on time even when it is clearly dangerous, rushing to get back for supper, giving in to peer pressure to take a dangerous shortcut to speed the journey, etc. Supervisors must keep the real and safe goals of the group in mind;
d. the 'risky shift phenomenon' – which suggests that people in groups tend to make riskier decisions than if there were on their own. Inexperienced teams are especially subject to this, either because of fear, unwillingness to share their feelings, a desire just to go along with the crowd, or poor decision making skills. Groups may also be unwilling to admit they've taken on too much, and individuals won't speak out for fear of being labeled cowards; and,
e. poor or unsound judgement – supervisors are the primary resource for experience, knowledge and judgement. A supervisor cannot afford to get into situations where they are inexperienced, or beyond their personal level of skill and ability. Cadet leaders can be held accountable for decisions and actions that demonstrate 'gross negligence' – "…an act falling greatly below the standard established by law for the protection of others against unreasonable risk of harm."

SUPERVISION FOR ASSESSING SKILLS

Supervising shows your followers that you think their work is important. Proper supervision will allow you to adapt to meet with changing circumstances, it will also allow you to immediately correct any errors or inconsistencies of performance. Immediate corrections of mistakes will not only ensure that the objectives are being met, but will significantly improve your cadet's abilities.

There is an established procedure for correcting a cadet's work if it is not meeting the set standard. Once a problem is detected, the leader should:

1. Stop the cadet;
2. Explain what is wrong with the work;
3. Demonstrate and explain the correct procedure;
4. Have the cadet continue to work, while the leaders inspects; then,
5. Follow up on the cadet at a later date by assigning that cadet a similar task so that improvement can be noted.

As a leader, it depends on your personal initiative to decide whom and when to supervise. As a standard operating procedure, cadets under your charge that are undergoing training should always be supervised. Newer, or less experienced cadets will require more supervision than cadets that are familiar with a task. Use direct supervision when:

a. cadets need assistance to achieve success;
b. failure is costly (safety, resources, esprit de corps);
c. cadets have had significant difficulty with this work in the past; and,
d. you are working with new and inexperienced group.

Supervision to assess skills is a balance of being able to see and hear everything pertaining to a task, without being overbearing. To properly oversee a cadet activity:

1. Find a good position to supervise from;
2. Observe the activity carefully;
3. Take notes on the task being performed;
4. Interact only when necessary (usually safety or gross error);
5. Check or visually **inspect** the completed work; then,
6. Inform cadets of the results.

EO 411.09: SOLVE A PROBLEM

INTRODUCTION

Every task that is assigned requires some degree of problem solving. Once given a task, a leader must begin to think about his or her plan of action. The action for solving a problem will depend not only on the complexity of the task, safety, and the resources available – time, people, skills, equipment, etc.

For simple tasks Standard Operating Procedures (SOPs) help speed up your work by establishing a standardized procedure for routine activities – e.g. labeling all kit with a permanent marker for easy identification.

For more complex tasks there are three methods to help the leader solve problems. You decide on the best method based on the time available. These methods are:

a. trial and error;
b. straight analysis; and,
c. logical analysis.

Although all have advantages, logical analysis is the method most often used by army cadets.

LOGICAL ANALYSIS AND THE MILITARY ESTIMATE

Logical Analysis – is the best process if there is sufficient time available for consideration of all the options. It helps reduce a complex thought process to a simple format. There are seven steps that the leader must follow in order to formulate a good plan of action:

1. **Confirm the task** – by understanding both the task and the aim or intent of the person assigning the task, you then have the freedom to act within your personal initiative to lead your team to success – especially when factors or plans change;
2. **Identify the problem(s)** – once the task is understood, the leader must consider the problems or challenges that may occur in the execution – this usually requires breaking the task down into its component parts ("do this, then this, then this…");
3. **Determine the 'Critical Factor'** – there is usually one problem which all others will depend on. This is called the

CRITICAL FACTOR. Once identified, a plan to solve the problem can be formed around solving the critical factor;

4. **Develop alternative solutions –** create as many possible solutions as time allows, drawing from the experience, knowledge and initiative of your team;
5. **Compare alternatives** – each solution must then be compared in order to decide upon the best solution. In order to decide, ask some of these questions:
 (1) Which solution is the simplest?
 (2) Which solution is the safest? What is the worst possible outcome? What are the dangerous elements?
 (3) Which solution is the most flexible?
 (4) Which solution uses available resources in an economical manner?
 (5) Which will solve the critical factor and all other problems?
6. **Determine the best solution** – choose the best solution to implement in your plan of action; and,
7. **Implement the solution** – implement the solution into the plan and get the task done. If the plan does not work like you wanted, you can always fall back on one of your alternative solutions.

The military estimate – is the process of logical analysis reduced to a simple format – **Aim**, **Factors**, **Courses Open** and **Plan**.

AIM	What is the team **aim or goal** – or what is the **intent** of your commander who assigned the task.
FACTORS	Safety, time, physical and mental condition of the team members, resources available, environmental conditions (rain, darkness, temperature), etc.
COURSES OPEN	List and compare the options open to the team. Consider safety, your team, resources and flexibility.
PLAN	Select the safest and most reasonable plan.

TRIAL AND ERROR AND STRAIGHT ANALYSIS

Trial and Error Analysis – is often applied in highly complex situations where a single solution does not seem obvious. Leaders are aware that error is a probability. By simplifying the situation, logical analysis can be applied to eventually solve the problem. This method should be utilized if there is a great deal of time available and the possible outcomes are not serious. E.g. a team has been tasked with loading a vehicle with equipment. They try several ways of loading, only to discover that the most important factor is not that everything fits but that all the heavy items are placed forward of the rear wheels.

Straight Analysis – involves a compressed problem solving process because time is of the essence. The most important considerations will be met while secondary ones will be overlooked – e.g. a leader will rescue a cadet from a capsized canoe, before recovering any equipment.

MAKING A SIMPLE PLAN

A plan will answer these questions:

a. what tasks must be done to achieve team goal or task?;
b. who will do what jobs?;
c. when must the work start? If there is more than one phase, when will each phase start and finish?;
d. when must the whole job be finished?;
e. where will the job be worked on? What routes or travel arrangements are there?;
f. how is each task to be done? What SOP's are to be used? What rules and regulations apply?;
g. what is the supervisory plan?;
h. what is the emergency plan and who is responsible for each part of it?;
i. what dress, equipment, resources are required?;
j. how will the team communicate (radio, whistle, voice, hand signal, etc.)?; and,
k. who is in charge?

THE PROBLEM SOLVING CLIMATE

The ground rules for developing a problem solving climate are:

a. express regard, respect and consideration for the thoughts and opinions of each team member;
b. encourage team members to assist each other in their expression of opinion;
c. implement the sound ideas and suggestions advanced by team members;
d. promote the feeling that each person is an important member of the team; and,
e. permit the expression of contrary opinions, knowing that failing to do so may lead to members becoming preoccupied, withdrawn, or resistant to decisions arrived at.

JUDGEMENT

Sound judgement is a leader's primary tool in safe and reasonable decision making. Judgement is a cycle of three thought processes: inductive reflection, deductive reflection, and evaluative reflection. Inductive reflection is used to make general concepts from experience – e.g. participating in a weekend hike forms some concepts of hiking in your mind. Deductive reflection is used to make specific predictions based on general concepts – e.g. having been on a hike before, you are able to make predictions about what the next hike will be like. We use evaluative reflection to analyse the accuracy of our predictions and then to define or refine our general concepts – e.g. the second hike was on a hilly route, so the new experience of hiking up and down hills is added to our overall understanding of hiking in general.

Inductive reflection forms the base of skill and knowledge. Deductive reflection allows us to use what we know to overcome challenges and evaluative reflection allows us to learn from success or failure.

Sound judgement must be developed in this manner, through a continuing process of learning, applying, and learning. The key is that you cannot develop sound judgement without challenging yourself and then analysing both your successes and your failures. Listen to other leaders and analyse their good judgement. Keep a logbook or journal to assist your learning process. Never stop learning or trying.

EO 411.10: ELEMENTS OF TASK PROCEDURE

Task procedure – is the whole process by which a leader makes their reconnaissance, create plans, and issues orders to complete a task. It is the primary procedure for planning and organizing a complex activity like a weekend exercise. These procedures ensure that the task is planned and completed in a timely and orderly manner – it is a standard used extensively in the CF and throughout NATO. As part of task procedure, a leader will often create, or be involved in creating, an Operations Order – the primary planning tool for complex activities.

SEQUENCE OF TASK PROCEDURE

1. **Receive Warning Order;**
2. **Make quick time appreciation;**
3. **Do a quick reconnaissance;**
4. **Prepare and transmit warning order;**
5. **Receive Operations Order;**
6. **Make a detailed time appreciation;**
7. **Update your warning order (if required);**
8. **Do a detailed reconnaissance;**
9. **Make a plan and prepare orders; and,**
10. **Issue your orders.**

WARNING ORDER

Warning Orders – are issued so subordinates can commence planning and preparation for the upcoming task. They are used with larger, more complex situations (e.g. weekend exercise, citizenship activity). They are issued in sufficient time for all participants to plan and prepare.

Content of a Warning Order – a warning order usually tells you:

a. who's involved in the activity what the activity is, where it will be and when it is;
b. why the corps/team is participating in the activity;
c. brief description of resources required from participants;
d. place and time that the formal orders will be held, and/or where the group is expected to meet to start the activity;
e. the "no move before" time – essentially the start time of the activity; and,
f. any special administration instructions.

In Army cadets, the Warning Order (WngO) acts not only as a tool for preparing corps members for an activity, but it is also a method of communicating the corps plans to parents and guardians of the cadets. This makes a cadet WngO an important document. It is often a good idea to give copies of the WngO to cadets, rather than relying on them writing down or remembering all the information.

WARNING ORDER (example)

1. All members of 2317 RCACC will participate in the annual Remembrance Day Parade, 11 November 2001, at the Royal Canadian Legion Brach 480.
2. This parade is a part of your Citizenship training requirements and attendance is highly encouraged.
3. All participants will wear C-1 uniform with jacket.
4. All participants to assemble in parking lot behind Legion at 1300hrs. Parade departs at 1330hrs.
5. Troop commanders and BSM to meet at the Legion hall, at 1230hrs for Orders Group.
6. A meal will be served after the parade. Parents, guardians, friends are invited to view the ceremony.

TIME APPRECIATION

Perhaps the most difficult element of planning any activity is the time factor involved. How much time do I have to prepare? How long will the activity take? What time does it begin? By what time must it be finished? A time appreciation (or estimation) helps to make sure that the time available for a given task is put to best use. In this way more jobs get done in the same amount of time.

A detailed time appreciation is calculated starting from when the task needs to be finished. On June 6, 1944 the beach landings in Normandy by the Allies of the Second World War began. The operation was officially called **Operation Overlord** but everyone commonly referred to it as **"D Day"**. All military operations are scheduled to begin on D Day and the hour at which they are scheduled to start is called H Hour. All the days before D Day start from D minus 1 or D-1. Similarly, the hours prior to H Hour start from H 1. (Once D Day, H Hour have been reached, the clock starts turning the other way and you get for example D + 1, H + 1; D + 2, H + 2, etc.) Because the start time for military operations is so important, all time appreciations start from D Day, H Hour.

There are four steps in formulating a detailed time appreciation. Each of the steps will help you to make the best use of the time available in order to get the job done. The steps follow and are most often asked in the form of a question:

1. **how much time do I have** between now and when the task must be completed?
2. **what must be done** during the time that I have available?
3. **how long will each task identified in step 2 take** to complete? Estimate a minimum time for each based on your experience and knowledge. If time is too short you may have to reduce the time allotted to some tasks or eliminate some tasks altogether. Success of your appreciation depends on your accuracy in this step; and,
4. **what is the logical sequence** in which the tasks identified in step 2 should be completed? Save some time by scheduling tasks that can be done together (concurrently)?

EXAMPLE: DAY OF ANNUAL PARADE	
Completion time	1900hrs
Parade begins	1630hrs
Task begins	1600hrs
Issue of orders	1450hrs
Prepare plan and orders	1400hrs
Detailed recce	1300hrs
Update warning order	1200hrs
Detail time appreciation	1145hrs
Prepare and transmit warning orders	1140hrs
Quick recce	1107hrs
Quick time appreciation	1105hrs
Receive orders	1100hrs

The second step in task procedure calls for a quick time appreciation only. At this point you only need an estimate of the times required for individual tasks. Ensure that you keep in mind that the WngO indicates a time and place for the formal orders session – be sure whether or not your commander wants you there! When you do a quick reconnaissance, and get feedback from your team, you'll be better able to make a detailed time appreciation (step 6 of task procedure).

RECONNAISSANCE

After completing a quick time estimate, you'll need to do a quick reconnaissance (recce) to get information on location, routes, environmental dangers or obstacles, and facilities and resources available. Often, this quick recce will be done by examining maps, getting feedback from people who've been in the area, checking stores lists, or other general studies. When there is plenty of time, you can even go to the location, travel the routes, or otherwise examine the details in person.

The detailed recce (step 8) is your opportunity to study the location and resources in depth. It can be completed while the team prepares. You'll want all team members who have key responsibilities in the activity to accompany you on this detailed recce. This is also your opportunity to assess the dangers and risks to your team, and take appropriate action to reduce or eliminate them.

ORDERS

After your quick recce, you now have enough information to pass on a WngO to your team. Cover all points and information that they need to know to prepare for the activity. Your WngO gives them enough new tasks to keep them busy as you continue your planning – they will also have enough information on the activity to use their initiative to prepare themselves and the team.

You have now prepared to receive further detailed orders about the activity. These will usually be passed to you through a formal 'Operations Order' (OpsO), communicated to all participants at an 'Orders Group' (often called an *O group*).

After receiving these detailed instructions, complete your detailed time appreciation. Any new information pertaining to your team can be communicated by updating your original WngO to them.

Now complete a thorough recce while your team continues their preparations. With a detailed time appreciation and recce complete, you are now prepared to issue an Operations Order to your own team. It will be based on the OpsO you received, but you will add all details pertaining to the actions of your team – plus information you have gathered in your recce.

OPERATIONS ORDER

Operation Order – the body of a Operations Order follows a standard format. The format consists of five paragraphs:

SITUATION
MISSION
EXECUTION
SERVICE SUPPORT
COMMAND AND SIGNALS

"SMESC"

Situation – the WHO, WHAT, WHERE and WHEN of the planned activity – also includes if there are any people from outside the cadet corps involved.

Mission – the aim of the activity (WHY).

Execution – HOW will the activity happen – a breakdown of the activity in stages with more detail:

a. **General Outline** – gives a brief summary of the activity;
b. **Grouping** – explanation of how teams and individuals will be organized
c. **Tasks** – gives a detailed breakdown of each individual's job in order to have a successful completion of the task. Individual or team taskings will be listed here either under their specific name or position. Will also include general tasks like supervision and safety responsibilities;
d. **Coordinating instructions** – to include where appropriate:
 (1) known dangers and risks;
 (2) timings of phases (individual steps or tasks);
 (3) routes;
 (4) boundaries;
 (5) assembly area or start point;
 (6) finish site or rendezvous;
 (7) bivouac sites, emergency evacuation sites, meal sites;
 (8) emergency plan;
 (9) supervisory plan;
 (10) priority of work (what has to be done first);
 (11) other teams, groups, civilians in the area;
 (12) quality and quantity of work expected – construction details; and,
 (13) any other important coordination details.

Service Support – contains all details concerning support for the activity:

a. transportation;
b. medical;
c. training equipment required;
d. water, feeding and rations;
e. communications equipment;
f. environmental concerns;
g. dress and personal equipment required; and,
h. other logistical or administrative details.

Command and Signals – illustrate the chain of command indicating all appointments of responsibility, the location of the HQ, or command post. If there are any details concerning communications equipment, they should be indicated along with call signs for communicating with the OPI and group leaders.

Staging of Orders – you should prepare for, or 'stage,' your orders. Staging your orders means to do the following:

a. assemble the key participants and seat them in order of tasks to be performed and next to the people they will be working with ('grouped' with);
b. display any maps, diagrams, or other visual aid which would help those receiving the orders in understanding the plan;
c. make the group comfortable (shelter from the elements, light at night, etc.);
d. the *O group* should take place in a convenient location, within view of the task site when possible; and,
e. briefly introduce the outline of the activity. This will serve to help the followers understand the scope or extent of the activity.

Delivery of Orders – in the actual delivery of the orders inspire your audience by using positive words and a calm, confident voice. Remember to:

a. start the "O" group with the word "**ORDERS**." This indicates to the participants that the gathering has become formal;
b. give orders slowly and clearly, and state the paragraph and sub-paragraph headings – to assist those taking notes;
c. use maximum eye contact to keep high interest, and to notice if there is any confusion;
d. on completion of orders, synchronize watches and ask for questions by rotation through the seating plan;
e. confirm key tasks are understood by asking direct questions tt those team members tasked; and,
f. once questions are answered, motivate and encourage with a few positive words.

EO 411.11: DESCRIBE TWO TYPES OF DISCIPLINE

INTRODUCTION

Cadets are expected to conduct themselves in a manner that reflects positively on the Canadian community and the Royal Canadian Army Cadet movement.

Discipline in the cadet movement is a system of rules and training that produces orderliness, teamwork, self-control and respect – in effect, it creates the model of the Army cadet as a good citizen and a responsible leader. This disciplinary system is based on the ethical foundations of Canadian democracy, and the structure of the Canadian Forces. In other words, discipline in the Royal Canadian Army Cadets means that everyone is equal and important, and that leaders at all levels are responsible for instructing and maintaining discipline. The key to strong discipline in a voluntary organization like the RCAC, lies in the willingness of all members to follow the rules of the organization. Discipline, therefore, is a matter of persuasion, not force.

There are two types of discipline, 'voluntary' or 'imposed.' **Voluntary discipline** (or self-discipline) – is where individuals take the responsibility of controlling their own actions for the good of the group. **Imposed discipline** – is the purposeful imposition of the leader's will on the cadets in their charge in order to benefit the group.

VOLUNTARY DISCIPLINE

Voluntary discipline is a skill that is learned, the same as any other skill. An individual must be ready and willing to learn it. There are several stages of development:

a. the individual accepts the underlying tenants of equality and the authority of command of cadet leaders;
b. the individual demonstrates a will to participate in a team environment;
c. the individual uses sound judgement and their initiative to make disciplined decisions; and,
d. the individual acts as a role model for others.

Individuals have their own set of values in which the team goals and rules are given (or not given) priority. The key to developing voluntary discipline is to establish it early in a cadet's training. This embeds it in

their own value system, and gives it a high priority as the cadet progresses through their training.

Remember that each cadet has a life outside cadets, including cultural, religious, and social value systems. You will have limited success altering or affecting any of these values – nor should you attempt it! It's better to get to know each cadet in your team to understand what their personal value system is, and through this knowledge you can help the cadet accept the cadet system of discipline into their personal values.

IMPOSED DISCIPLINE

A leader imposes discipline when it appears that the group or individual is unable or unwilling to do so voluntarily. Imposed discipline can be a function of coordinating a team so that the team can better discipline themselves, or actively assisting individuals in re-focusing on, or re-prioritizing, their values. It is not possible to impose discipline on a group or individual that has not given discipline a high priority in their personal values.

As a coordinator, a leader must create an environment where groups and individuals can easily employ self-discipline. This environment is created with preventative and proactive measures.

Preventative measures:

a. ensure the rules are understood;
b. keep cadets occupied and motivated with meaningful activities;
c. be sure that communication is flowing both ways;
d. take care of the cadets' individual needs – safety, security, food and water, sleep, companionship, etc;
e. be positive and approachable;
f. establish team goals that have meaning for all members;
g. be consistent and follow through with expectations;
h. encourage leadership by assigning special tasks – especially to those who you have identified as requiring extra leadership development
i. acknowledge and praise voluntary discipline; and,
j. give fair warning to groups or individuals who show difficulty in disciplining themselves that you intend to act to impose discipline.

Proactive measures:

a. enforce the rules equally and reasonably;
b. identify and praise discipline;
c. identify disruptive behaviour to the individual or group immediately, and communicate both the appropriate steps to repair their behaviour, encourage them to continue to participate and, if necessary, outline the consequences of their failure to improve;
d. adapt the environment to reduce further disruption;
e. give positive reinforcements to the whole group and ensure the disruptive person(s) is settled back into the group;
f. reinforce and praise positive behaviour in those who have been warned;
g. remove individuals or groups who continue with disruptive behaviour after an appropriate number of verbal reminders, and carry out a formal process of warning (below); and,
h. motivate the group to continue without the removed person(s).

A formal process of warning is usually a SOP at a corps or summer training centre, established by the Commanding Officer. Formal warnings are almost always carried out **in the presence of Cadet Instructor Cadre Officers**. The process will generally take the form of:

a. after verbal reinforcements and re-motivation have failed, an individual is removed from the activity and counseled in private. This session may include:
 (1) allowing the cadet to explain their behaviour and asking them to describe how they might better display a positive behaviour towards the team – this allows them to take ownership of the problem and they'll feel that any solution is voluntary and not imposed (empowers them);
 (2) helping the cadet prioritize discipline in their personal values; and,
 (3) giving the cadet a physical reminder of their behaviour in the form of a briefly written summary of the incident with the steps for improvement – this is signed by the leader and the cadet, and acts as a formal promise by the cadet to improve, as well as a sign of the leader's intention to help the cadet;
b. if the same cadet continues to demonstrate poor judgement or discipline in the same area as previously dealt with, a leader may choose to impose a formal warning on the cadet. The

cadet is removed from the activity and counseled in private. This warning can has two levels of severity:

(1) **verbal warning** – where the cadet and leader, plus an experienced mediator, discuss the disruptive behaviour and find solutions that are acceptable to all parties. A written record is kept of the session and the solutions, and it is signed by all parties; and,

(2) **written warning** – where the mediation process from the verbal warning is continued and a formal written contract is created, outlining clearly the responsibilities of the cadet and the leader in improving. All parties sign – this is usually considered the final level of warning, any further repetitions of poor discipline and the cadet could be ordered to remove themselves from the organization.

When dealing with cadets who are misbehaving, you have to look at the whole picture. Does the situation provide them an opportunity to fool around? Are there inconsistencies in the program schedule that cause cadets to feel anxious and unsure of what's happening next? Empty spaces or "free time" in a program encourage restlessness and invite difficult behaviours. Offer appropriate choices for "free time."

There are some simple techniques you can use when approaching cadets who are acting out:

a. vary your voice and tone;
b. show no favouritism;
c. use direct eye contact;
d. give verbal direction when the behaviour persists; and,
e. actively listen when a cadet is expressing a problem.
f.

CONSEQUENCING

Consequencing is a process of relating action to consequence. If team members understand that they will be rewarded (praised) for demonstrating discipline, and they will be corrected for not demonstrating it, they will be more comfortable and confident. When necessary, reminding cadets who misbehave of the negative consequences may assist them in prioritizing discipline. Guidelines for consequencing are:

a. consequences need to be logical and fit the situation;
b. individuals need to feel that the consequence is voluntary – they need to take ownership of the solution and impose the consequence on themselves; and,
c. consequences should always have a component of rebuilding – they are not punishments but opportunities for reflection and learning.

Examples of consequences are:
a. a penalty in sports;
b. temporary loss of privileges; or,
c. temporary removal from activity and/or from the team;

Remember, teams should face consequences that effect their activities as a team. Individuals should face consequences that effect their activity as an individual. Do not confuse individual acts and team consequences, or vice versa.

MORE THAN YOU CAN DEAL WITH

If you can not deal with the problem, use the chain of command and involve a leader with more experience. Involve a CIC Officer when you are using the formal warning process.

For all Cadet Harassment and Abuse Prevention (CHAP) related problems, report them immediately to your Unit Human Rights Advisor (UHRA).

EO 411.12: DEFINE LEADER'S RESPONSIBILITIES AS A ROLE MODEL

INTRODUCTION

Being a role model can be interpreted in many different ways. A role model can be someone you look up to or admire, someone you want to be like in skill or abilities, and someone you want to learn from. As a cadet leader you are both a role model for how to act, and a role model of how to learn.

THE BEHAVIOURAL ROLE MODEL

We have all heard the term "Lead by Example". There are two types of examples; **Deliberate** – something you do on purpose so that the cadets can see you, and **Unconscious** – when the cadets notice what the leader does, without the leader knowing they are being observed.

Some hints for a role model:

a. as a leader you are always a role model, good or bad;
b. demonstrate pride in your appearance;
c. learn everything there is to know about your job;
d. show respect and loyalty;
e. keep your morale up, especially during hard times;
f. prepare yourself well for all duties and activities;
g. demonstrate good self discipline at all times; and,
h. be a fair, firm and conscientious leader.

THE LEARNING ROLE MODEL

As a cadet leader you also take an active role in showing your cadets how to learn – an art often called 'facilitation.' Cadets have joined the program to learn and grow – and it is your responsibility as a leader to guide them in that process.

You have learned in EO 411.09 that sound judgement is a skill to be developed, and that this development will only occur when a person can reflect on their experience and learn from it. Your responsibility as a learning role model is to assist your cadets in learning from experience, and using their new skill and knowledge to overcome future challenges.

When your cadets see that you, as their leader, are constantly striving to learn and develop your skills, they are more inclined to also adopt this attitude. But you can do more that this. You can create a formal environment where cadets will feel comfortable communicating, sharing, reflecting and learning from their experiences.

The most common, and easiest, activity to conduct, is a 'de-brief' – a session held as soon after an experience as possible. Team members are gathered around and invited by the leader to speak about their experience. Much like an attitude check, the idea is to encourage members to express themselves freely without fear of condemnation.

The level of depth of the de-brief should relate to the team goal – e.g. the de-brief for a recreational activity might be “That was fun, wasn’t it?” An activity designed to challenge teamwork might require a more formal session where members get an opportunity to talk about cooperation, communication, morale, etc. You must establish firm rules on behaviour before starting any de-brief.

A traditional format for a formal de-brief can be stated as:

a. **What?** – members describe what happened during the activity much like a play-by-play announcer in sports – covering the order of events and highlights. This does two things – it focuses the team on the activity, and it allows them to relive the experience by sharing it;
b. **So what?** – the leader initiates discussion around what the members learned from the experience. This discussion can be fueled by carefully planned questions (examples below)or kick-started with an open ended statement like, “Right now I am feeling…”; and,
c. **Now what?** – this is where the learning is transferred to the next activity, or real life. Members indicate how they will use this learning in the future.

Questions asked by the leader to the group should focus on one particular area at a time. Some examples are:

Communication:

a. Can you give an example of when you thought you communicated effectively?
b. How did you know you communicated effectively?
c. Who didn't understand when someone was communicating?

Feelings:

a. Did anyone feel like they weren't being understood?
b. Were there any signs of non-verbal feelings expressed in your group?
c. What risks did you take?

Listening:

a. Who made suggestions for completing the task?
b. Were all of the suggestions heard?
c. How did it feel when you made suggestions to the group?

d. How did it feel when your suggestion wasn't acted on?

Leadership:

a. Who assumed leadership roles during the activity?
b. Did everyone get a chance at a leadership role?
c. Was it difficult to assume a leadership role?
d. Why didn't some of you take a leadership role?

Cooperation:

a. Give a specific example when the group cooperated?
b. How did it feel to cooperate?
c. What are the rewards of cooperating?

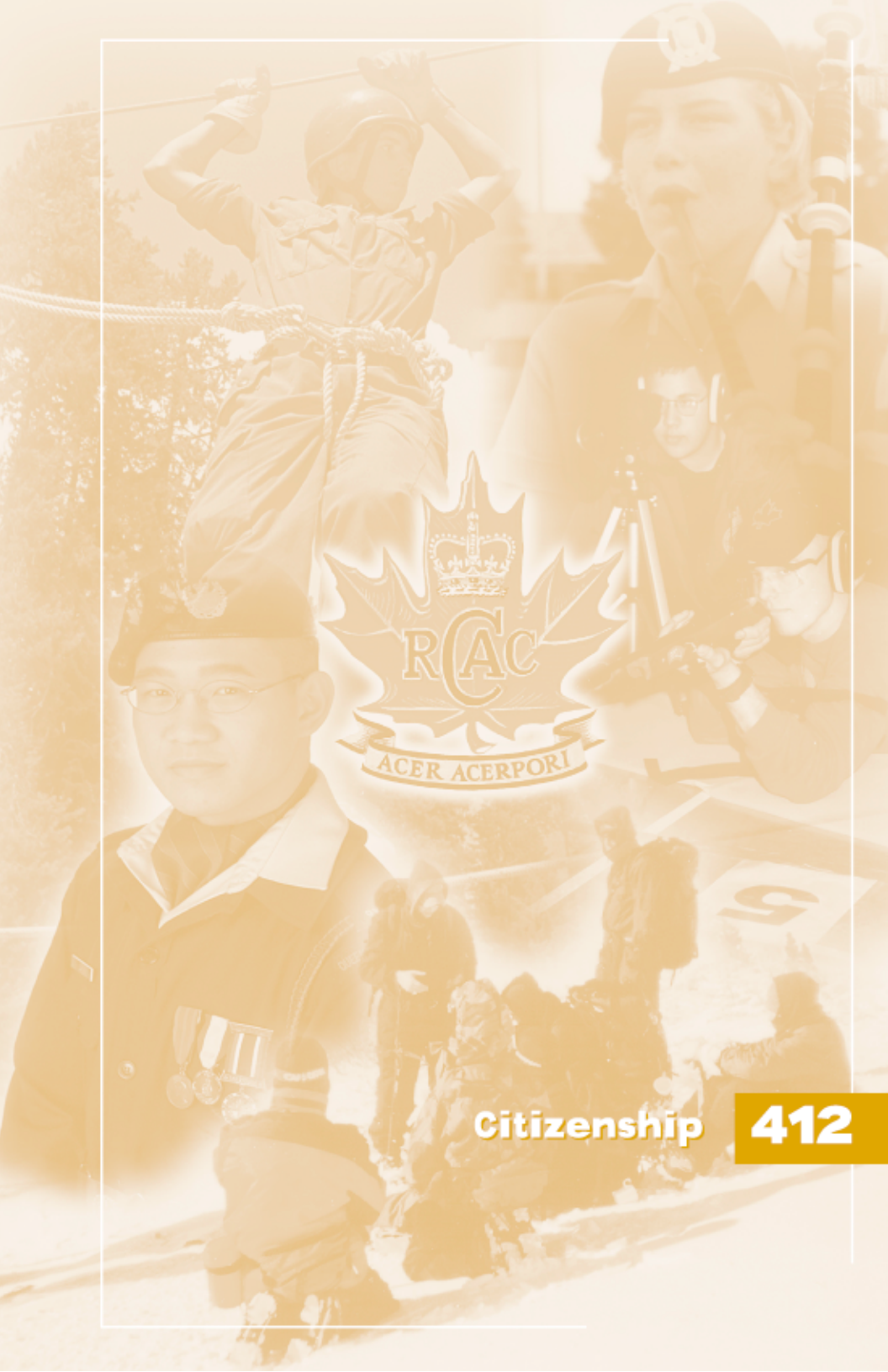
Closure:

a. What did you learn about yourself?
b. What did you learn about others?
c. How can you use what you learned in your life?
d. If you could start this activity over, what would you do differently?
e. When might you use this skill again?

By leading a debrief it gives people time to reflect on what just happened. It does not matter if it was a good or bad experience, what is really important is that it was a learning experience.

NOTES:

NOTES:



Citizenship 412

PO 412 CITIZENSHIP

EO	DESCRIPTION	PAGE
01	Discuss Canadian Citizenship.	12-1
02	Perform a Community Service.	12-6
03	Discuss roles of service clubs in your community.	12-7
04	Recognise important elements of Canadian history and heritage.	12-11
05	Describe three types of government.	12-20
06	Describe the structure of the Canadian government.	12-24
07	List dates when the ten provinces and three territories joined confederation.	12-28
08	Organize a corps community activity.	12-40

EO 412.01: DISCUSS CANADIAN CITIZENSHIP

DEFINITION OF A CITIZEN

All people born in this country are considered to be Canadian citizens. Likewise, anyone born to a Canadian parent is considered to be a Canadian citizen. Canadian Citizenship can also be achieved by applying for citizenship and passing a citizenship test. Canada welcomes about 100 000 new citizens through immigration each year.

What does Canadian Citizenship mean? Canadian history and traditions have created a country where our values include tolerance and respect for cultural differences, and a commitment to social justice. We are proud of the fact that we are a peaceful nation and that we are accepted in many places around the world as peacekeepers.

Canadian Values:

a. **Equality** – we respect everyone's rights, including the right to speak out and express ideas that the others might disagree with. Governments have to treat everyone with dignity and respect, which are both fundamental to our form of democracy;
b. **Tolerance** – we try to understand and appreciate the cultures, customs and traditions of our neighbours;
c. **Peace** – we are proud of our non-violent society and our international role as peacekeepers; and,

d. **Law and Order** – we respect democratic decision making and the "rule of law". We promote due process so that the courts and the police will treat everyone fairly and reasonably, and we ensure that our elected governments remain accountable to Canadians.

THE CANADIAN HUMAN RIGHTS ACT (1977)

The Canadian Human Rights Act – The idea behind the act is that people should not be placed at a disadvantage simply because of their age, sex, race, or any other ground covered by the Act. That is called discrimination and is against the law. The Canadian Human Rights Act bans it in federal or federally regulated organizations, and the provinces and territories have similar laws forbidding discrimination in their areas of jurisdiction.

Under the Canadian Human Rights Act, it is against the law to discriminate on the basis of: race, colour, National or ethnic origin, religion, age, sex (including pregnancy and childbearing), marital status, family status, physical or mental disability (including dependence on alcohol or drugs), pardoned criminal conviction or sexual orientation.
It is also against the law for a person against whom a complaint has been filed to retaliate or threaten retaliation against the individual who filed the complaint, or against the alleged victim.

CANADIAN CHARTER OF RIGHTS AND FREEDOMS (1981)

Guarantee of Rights and Freedoms – " Guarantees the rights and freedoms set out in it subject only to such reasonable limits by law as can be demonstrably justified in a free and democratic society."

Fundamental Freedoms – " Everyone has the following fundamental freedoms: freedom of conscience and religion; freedom of thought, belief, opinion, and expression, including freedom of the press and other media of communication; freedom of peaceful assembly; and freedom of association."

Democratic Rights – " Every citizen of Canada has the right to vote in an election of members of the house of commons or of a legislative assembly and to be qualified for membership therein."

Mobility Rights – "Every citizen of Canada has the right to enter, remain in and leave Canada. Every citizen of Canada and every person who has the status of a permanent resident of Canada has the right: to move to and take up residence in any province; and to pursue the gaining of a livelihood in any province."

Legal Rights – " Everyone has the right to life, liberty and security of the person and the right not to be deprived thereof except in accordance with the principals of fundamental justice."

Equality Rights – " Every individual is equal before and under the law and has the right to the equal protection and equal benefit of the law without discrimination and, in particular, without discrimination based on race, national or ethnic origin, colour, religion, sex, age or mental or physical disability."

Official Languages of Canada – " English and French are the official languages of Canada and have equality of status and equal rights and privileges as to their use in all institutions of the parliament and government of Canada."

Enforcement – " Anyone whose rights or freedoms, as guaranteed by this Charter, have been infringed or denied may apply to a court of competent jurisdiction to obtain such remedy as the court considers appropriate and just in the circumstances."

RESPONSIBILITIES

As a citizen you have a responsibility to:

a. vote in elections;
b. help others in the community;
c. care for and protect our heritage and environment;
d. obey Canadian laws;
e. express opinions freely while respecting the rights and freedoms of others; and,
f. eliminate discrimination and injustice.

The most important rights and privileges for a Canadian citizen are to vote and run for office. Only a Canadian citizen can run for office in a federal election.

THE OATH OF CITIZENSHIP

" I, (name in full), swear/affirm that I will be faithful and bear true allegiance to Her Majesty Queen Elizabeth the Second, Queen of Canada, Her Heirs and Successors, according to law and that I will faithfully observe the laws of Canada and fulfill my duties as a Canadian citizen."

O CANADA

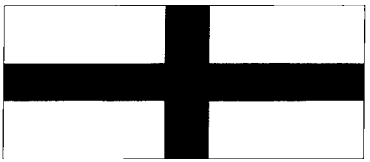
The music was composed by Calixa Lavallée, and the lyrics written by Sir Adolphe-Basile Routhier (French) and R. Stanley Weir (English). The official version was proclaimed on 01 July 1980.

O Canada! Terre de nos aïeux,
Ton front est ceint de fleurons glorieux!
Car ton bras sait porter l'épée,
Il sait porter la croix!
Ton histoire est une épopée
Des plus brillants exploits.
Et la valeur, de foi trempée,
Protégera nos foyers et nos droits,
Protégera nos foyers et nos droits.

O Canada! Our home and native land!
True patriot-love in all our son's command.
With glowing hearts we see the rise,
The true north strong and free;
From far and wide, O Canada,
We stand on guard for thee.
God keep our land glorious and free!
O Canada, we stand on guard for thee.
O Canada, we stand on guard for thee.

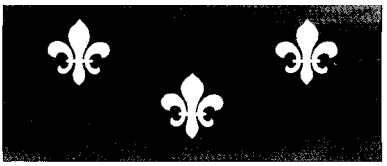
CANADIAN FLAG HISTORY

St George's Cross



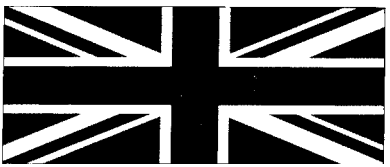
15th century flag of Great Britain and probably the first European flag to fly over what is now Canada, carried by John Cabot in 1496.

Flag of Royal France



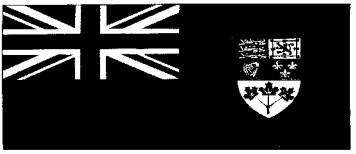
Raised by Jacques Cartier when he landed at Gaspe Harbour in 1534.

Union Jack



Created in 1606 from the crosses of St Andrew, St Patrick and St George, it was flown over British settlements in Newfoundland, in 1621. On 18 December 1964, Parliament approved using the Union Jack as a symbol of Canada's membership in the Commonwealth of Nation and her allegiance to the Crown.

Red Ensign



Created in 1707 as the colours of the British merchant mariners, it was authorized for use on Canadian ships (with the Canadian shield displayed in the fly) in 1892. In 1924 it was authorized to be displayed at Canadian Government buildings abroad, and in1945, for federal buildings inside and outside Canada.

Present National Flag



Our flag was adopted by Parliament in 1964 and proclaimed by Queen Elizabeth II on 15 February 1965. The flag is red with a white square in the centre, which contains an eleven pointed maple leaf that is a trademark registered to Canada. The National colours of red and white were declared by King George V, on 21 November 1921. The national flag is flown daily, from sunrise to sunset, at all Government buildings, airports, and military bases and establishments inside and outside Canada.

EO 412.02: PERFORM A COMMUNITY SERVICE

Being a good citizen means actively and purposefully participating in your community. Perform a community service by volunteering for an activity that directly benefits your community.

EO 412.03: DISCUSS ROLES OF SERVICE CLUBS IN YOUR COMMUNITY

A service club dedicates itself to helping out members of their community who may not be able to help themselves. They might help by raising funds for research into children's diseases, for medical treatment for Canadian veterans, supporting youth groups, or assisting people who live below the poverty line.

THE ROYAL CANADIAN LEGION

By the end of WWI there were a total of 15 veterans' groups and a number of regimental associations representing former service members in Canada. Despite their common goal, to help returned servicemen in need, their efforts were fragmented and largely unsuccessful. In 1925, an appeal for unity lead to the formation of the Dominion Veterans Alliance, out of which evolved The Canadian Legion of the British Empire Services League the following year. The Legion quickly became a persuasive advocate for improved pension legislation and other benefits for veterans and their families.

WWII brought an influx of new demands. The Legion provided canteens, entertainment and reading material for those serving abroad and at home, as well as correspondence courses to help them out on their return to civilian life. But most importantly, from the onset of war, the legion began to prepare for the returning troops. Financial compensation, clothing allowances, pensions, medical treatment, preference in the civil service, vocational training, land settlements were all routinely arranged and provided. To this day the Legion maintains a nation-wide network of professionals helping veterans, ex-service members and their families to secure the pensions and benefits to which they are entitled.

Although the Legion was founded to advance the cause of veterans, its grass-roots structure led naturally to community service. Almost every Legion branch in Canada is involved in one or more youth programs. It may be sponsoring a local hockey team, a cadet corps or a scout troop. It may be youth leadership training or other programs that meet the needs of youth in the community. The Legion wants Canadian youth to know that the freedoms they enjoy did not come without a price. The legion supports the cadet movement in Canada to promote leadership, fitness and the spirit of patriotism. It also supports the Legion Medal of

Excellence which many branches and commands provide to honour outstanding cadets.

Today, with over 450 000 members, The Royal Canadian Legion is the largest veterans-based community service organization in the country, contributing millions of dollars and voluntary hours to help Canadians, particularly veterans, seniors and youth. Most Canadians associate the Legion with Remembrance ceremonies and activities perpetuating the memory of those died in the two world wars and the Korean War. Probably the most widely known activity is the National Poppy-Remembrance Campaign in which Legion members, friends and cadets distribute poppy emblems for donations to raise money for needy veterans, ex-service members, and their families.

LIONS CLUB

Since 1917, Lions have served the world's population through hard work and commitment to make a difference in the lives of people everywhere. With 1,436,487 members serving in more than 44,500 clubs in over 180 countries and areas, Lions Clubs International is the world's largest service club organization. Canada alone has over 1,900 clubs and over 49,000 members. Lions are recognized worldwide for their service to the blind and visually impaired. The club motto is "We Serve."

Lions International Objects

a. To create and foster a spirit of understanding among the peoples of the world.
b. To promote the principle of good government and good citizenship.
c. To take an active interest in the civic, cultural, social and moral welfare of the community.
d. To unite the clubs in the bonds of friendship, good fellowship and mutual understanding.
e. To provide a forum for the open discussion of all matters of public interest; provided, however, that partisan politics and sectarian religion shall not be debated by club members.
f. To encourage service-minded people to serve their community without personal financial reward, and to encourage efficiency and promote high ethical standards in commerce, industry, professions, public works and private endeavors.

ROTARY CLUB

Founded in 1905, by Chicago Lawyer Paul Harris and three business acquaintances, Rotary International is a worldwide organization of more than 1.2 million members, in more than 29,400 clubs in 160 nations. The Object of Rotary, is to encourage and foster the ideal of service as a basis of worthy enterprise and, in particular, to encourage and foster:

a. First – the development of acquaintances as an opportunity for service.
b. Second- high ethical standards of business and profession; the recognition of the worthiness of all useful occupations; and the dignifying by each Rotarian of their occupation as an opportunity to serve society.
c. Third- the application of the ideal of service by every Rotarian to their personal business and community life.
d. Fourth -the advancement of international understanding, goodwill and peace, through a world fellowship of business and professional persons united in the ideal of service.

A good example of Rotary's work is their partnership with the World Health Organization and the United Nations to immunize all the children of the world against Poliomyelitis – the wild polio virus. To date, a billion children have been immunized throughout the developing world, by a million volunteers mobilized by Rotary. The goal of the Polio Plus campaign is to certify the eradication of Polio by the year 2005 – Rotary's 100th anniversary.

KIWANIS CLUB

The first Kiwanis club was organized in Detroit, Michigan, USA on January 21, 1915. A year later the Kiwanis Club of Hamilton, Ontario, Canada, was chartered, and Kiwanis International grew rapidly into a leading service club in these two founding nations. In 1962, worldwide expansion was approved, and today Kiwanis clubs are active in every part of the world. The club motto is "We Build." There are more than 8,500 Kiwanis clubs with more than 315,000 members in 82 nations and geographic areas.

Kiwanis' continuing service emphasis is called "Young Children: Priority One," which focuses on the special needs of children from prenatal development to age 5. Projects conducted as part of the "Young Children: Priority One" service emphasis involved $14.3 million and 1.3 million volunteer hours.

In 1994, Kiwanis launched its first Worldwide Service Project, a $75 million campaign in partnership with UNICEF to eliminate iodine deficiency disorders by the year 2000. Iodine deficiency (IDD) is rare in areas where iodized salt is used, but in other parts of the world, IDD is the leading cause of preventable mental and physical retardation. As many as 1.5 billion people are at risk, especially young children.

THE UNITED WAY

Is a non-profit organization that works in partnership with community agencies and organizations. By bringing groups together to share experience and expertise, the United Way is working with others to improve community life. Each year the United Way collects millions of dollars needed for essential health and social services and programs. The money is carefully distributed to meet the greatest need in our community and a rigorous review process ensures that the money is spent effectively.

BOYS AND GIRLS CLUB

The boys and girls club enhances the quality of life for children and youth by providing a safe and welcoming environment. It offers supervised activities, support and counselling for young people aged 6 to 18 years old. They also provide a social service of "at risk youth," special needs/ integrated services.

There are many more services in your community. Find out about them and get involved.

EO 412.04: RECOGNISE IMPORTANT ELEMENTS OF CANADIAN HISTORY AND HERITAGE

There are many symbols of Canada that have significant meaning for Canadians as well as people throughout the world. The image of the red maple leaf is internationally recognized as a symbol of democracy and peace. As a multicultural nation, we identify ourselves and our heritage with many symbols.

THE MAPLE LEAF



The maple leaf began to serve as a Canadian symbol as early as 1700. In 1834, the St. Jean Baptiste Society made the maple leaf its emblem. In 1836, Le Canadien, a newspaper published in Lower Canada, referred to it as a suitable emblem for Canada.

By 1860, the maple leaf was incorporated into the badge of the 100th Regiment (Royal Canadians) and was used extensively in decorations for the visit of the Prince of Wales that year.

During the First World War, the maple leaf was included in the badge of the Canadian Expeditionary Force. Since 1921, the Royal Arms of Canada have included three maple leaves as a distinctive Canadian emblem. With the proclamation of Canada's new flag in 1965, the maple leaf has become the most-prominent Canadian symbol. In 1939, at the time of World War II, many Canadian troops used the maple leaf as a distinctive sign, displaying it on regimental badges and Canadian army and naval equipment.

On February 15, 1965, the red maple leaf flag was proclaimed as the National Flag of Canada.

THE BEAVER



King Henry IV of France saw the fur trade as an opportunity to acquire much-needed revenue and to establish a North American empire. Both English and French fur traders were soon selling beaver pelts in Europe at 20 times their original purchase price. The trade of beaver pelts proved so lucrative that the Hudson's Bay Company honoured the buck-toothed little animal by putting it on the shield of its coat of arms in 1678. Sir William Alexander, who was granted title to Nova Scotia in 1621, had been the first to include the beaver in a coat of arms. The Hudson's Bay Company shield consists of four beavers separated by a red St. George's Cross and reflects the importance of this industrious rodent to the company. A coin was created to equal the value of one beaver pelt.

The beaver was included in the armorial bearings of the City of Montréal when it was incorporated as a city in 1833. Sir Sandford Fleming assured the beaver a position as a national symbol when he featured it on the first Canadian postage stamp – the "Three Penny Beaver" of 1851. The beaver also appeared with the maple leaf on the masthead of Le Canadien, a newspaper published in Lower Canada.

The beaver attained official status as an emblem of Canada when an "act to provide for the recognition of the beaver *(castor canadensis)* as a symbol of the sovereignty of Canada" received royal assent on March 24, 1975. Today, thanks to conservation and silk hats, the beaver – the largest rodent in Canada – is alive and well all over the country.

INUKSHUK

The indigenous people of the arctic coast and islands, a founding people of Canada, are known as Inuit – Inuktitut for “the people, those who are living today.” 5 000 years ago, the people known as Sivullirmiut migrated across Canada’s north, having crossed the Bering Land Bridge from Asia as much as 5 000 years before that. Today’s Inuit are descendants of the Taissumanialungmiut (Thule) people. They moved into the central and eastern arctic about 1 000 years ago, during a warming period of the Earth’s climate. Thule people used dogs for hunting and travel, they built and used the seal skin kayak and they used, maybe even invented, the large open skin boat called the "umiak".



In Inuktitut, one person is called an “Inuk.” Inukshuk, a stone representation of the human form, are used as landmarks for hunters and travelers. The Inukshuk has long been recognized as the *compass of the arctic*. Used for centuries, Inuit build the inukshuk “like a human – to point the way for travelers.” In 1999, the Inukshuk was chosen to symbolize the people of the north on the official flag for the Nunavut Territory.

TOTEM POLE

While totem poles are thought by many to be a symbol of First Nations culture generally, their production was limited to six tribes in British Columbia and southeastern Alaska. The tribes which carved totem poles were the Bella Coola, Haida, Kwakiutl, Tlingit, Tsimshian and West Coast. Pole carving flourished in the 19th century.



A Kwakiutl house and totem pole
on Vancouver Island.

The poles told stories or commemorated historical events. The figures were not gods or demons, but rather were symbolic like the figures in European heraldry. The top figure on a pole is usually the clan crest. The most common crests are the eagle, raven, thunderbird, bear, beaver, orca and frog. Eagles and thunderbirds have curved beaks, while the raven has a straight beak. Thunderbirds have outspread wings. Bears and beavers have ears on the top of their heads, and beavers also have large teeth. The orca (killer whale) has a dorsal fin. The figures under the crest represent figures in a story. The story may be a myth or legend, or it may be a story from the life of a person in the tribe. Totem poles were not worshipped, but the stories they told often inspired respect or veneration.

Most totem poles were carved from red cedar using knives and adzes, and early poles were painted using local materials. White was obtained from clay, yellow came from ochres, red from iron ore, blue from copper ore, and black from charcoal. Later poles were colored using pigments and paints obtained by trading with the white settlers. To raise the pole, a six foot hole was dug. The butt of the pole was placed over the hole, a rope was tied to the top of the pole and passed over an A-frame, and the pole was pulled erect.

There are 6 types of totem pole:

a. indoor house posts, which support the roof and carry clan emblems;
b. house frontal poles, which stand by the entrance of the house;
c. heraldic poles, which stand in the front of the house and give the family history;
d. burial poles, which carry a story about the deceased;
e. ridicule poles, which were sometimes erected to shame debtors; and,
f. potlatch poles, carved exclusively by the Haida to commemorate festivals.

(Totem information thanks to Evergreen-Washelli)

ORIGIN OF THE NAME “CANADA”

In 1535, two indian youths told Jacques Cartier about the route to "kanata." They were referring to the village of Stadacona; "kanata" was simply the Huron-Iroquois word for "village" or "settlement." But for want of another name, Cartier used "Canada" to refer not only to Stadacona (the site of present day Quebec City), but also to the entire area subject to its chief, Donnacona. The name was soon applied to a much larger area: maps in 1547 designated everything north of the St. Lawrence River as "Canada."

Cartier also called the St. Lawrence River the "rivière de Canada", a name used until the early 1600s. By 1616, although the entire region was known as New France, the area along the great river of Canada and the Gulf of St. Lawrence was still called Canada. Soon European explorers and fur traders opened up territory to the west and to the south and the area depicted as "Canada" grew. In the early 1700s, the name referred to all lands in what is now the American Midwest and as far south as the present day Louisiana.
The first use of "Canada" as an official name came in 1791 when the Province of Quebec was divided into the colonies of Upper and Lower Canada. In 1841, the two Canada’s were again united under one name, the Province of Canada. At the time of Confederation, the new country assumed the name of Canada.

THE ARMS OF CANADA

It is curious to note that no country has abandoned the practice of using armorial bearings, emblems and symbols being important for preserving traditions and inspiring love of country. Of these symbols, the coat of arms and the flag are the chief elements. Although the National flag is more frequently use as a symbol of Canada, the coat of arms is the oldest and serve as the foundation for the flag.



The present design of the arms of Canada was drawn by Mrs. Cathy Bursey-Sabourin, Fraser Herald at the Canadian Heraldic Authority office of the Governor General of Canada, and faithfully depicts the arms described in the words of the Royal Proclamation dated November 21, 1921. The present design was approved in 1994.



The shield – the design of the arms of Canada reflects the royal symbols of Great Britain and France (the three royal lions of England, the royal lion of Scotland, the royal fleurs-de-lis of France and the royal Irish harp of Tara. On the bottom portion of the shield is a sprig of three Canadian maple leaves representative of Canadians of all origins.



The ribbon – on the advice of the Prime Minister of Canada, Her Majesty The Queen approved, on July 12, 1994 that the arms of Canada be augmented with a ribbon with the motto of the Order of Canada: "Desiderantes Meliorem Patriam" (They desire a better country).



The crest – on the royal helmet is the crest. This symbol consists of a wreath or ring of twisted white and red silk on which stands a crowned gold lion holding in its right paw a red maple leaf. The lion is a symbol of valor and courage. The crest is used to mark the sovereignty of Canada. It is now the symbol used on the Governor General's Standard.



The supporters – the figures that stand on either side of the shield are known in heraldry as "supporters" and are often depicted in a ferocious manner. The King of England chose two lions while Scotland chose two unicorns. When James VI of Scotland became James I of England in 1603, he chose one lion and one unicorn as the supporters of his royal shield. Canada adopted the same pattern and used a lion on the shield's right holding a gold pointed silver lance from which flies the Royal Union flag, and a unicorn with gold horn, mane and hoofs, on the shield's left. Around its neck is a gold and chained coronet of crosses and fleurs-de-lis. The unicorn holds a lance flying a banner of royalist France, namely three gold fleurs-de-lis, on a blue background. The two banners represent the two principal founding nations that had established Canada's most enduring laws and customs.



The motto – Canada's motto "A Mari usque ad Mare" (From sea to sea) is based on biblical scripture: "He shall have dominion from sea to sea and from the river unto the ends of the earth (Psalm 72:8)". The first official use of this motto came in 1906 when it was engraved on the head of the mace of the Legislative Assembly of the new Province of Saskatchewan. The wording of the motto came to the attention of Sir Joseph Pope, then Under Secretary of State, who was impressed with its meaning. He later proposed it as motto for the new design of the coat of arms, which was approved by Order in Council on April 21, 1921 and by Royal Proclamation on November 21, 1921.



The four floral emblems – at the base of the arms are the floral emblems associated with the Canadian Monarchy: the English rose, the Scottish thistle, the French fleur-de-lis and the Irish shamrock.



The imperial crown – on top of the "achievement of the arms of Canada" is the imperial crown which is indicative of the presence of a monarch as Canada's Head of State. The shapes of symbols in a coat of arms can be altered by an artist since heraldry is an art as well as a science. However the symbols themselves can never be changed without formal approval. In 1957, when Canada's arms were slightly modified to produce a cleaner more contemporary design, the Government replaced the original Tudor crown of the 1921 design by a crown that would represent not just one of the royal families of English monarchs, but centuries of kings and queens of England. In accordance with the expressed wishes of Her Majesty Queen Elizabeth II, the Saint Edward's crown is now used for the arms of Canada. It is this crown that has been used for the coronation of kings and queens in Westminster Abbey for centuries.

CONFEDERATION

On July 1, 1867, the provinces we know as Ontario, Quebec, New Brunswick and Nova Scotia joined together in Confederation to create the new country of Canada. The British North America Act of 1867 made this Confederation legal.

EO 412.05 DESCRIBE THREE TYPES OF GOVERNMENT

Governments have always existed in one form or another. The form of government reflects society and its changing needs. Governments are classified according to how people share the power:

a. **Autocracy** – one person has absolute leadership (e.g. an absolute monarch such as the King of Jordan);
b. **Oligarchy** – a few people have power (e.g. Cuba under communism); and,
c. **Democracy** – control is vested in the population (e.g. Canada).

Governments in democracies are elected by the passengers to steer the ship of the nation. They are expected to hold it on course, to arrange for a prosperous voyage, and to be prepared to be thrown overboard if they fail in either duty. This, in fact, reflects the original sense of the word "government," as its roots in both Greek and Latin mean "to steer."

Democracy is more than a method of government, however, as it implies several important beliefs and traditions. One of these beliefs is that open discussion by a well-informed public will result in the best policies for the country. Another belief is that the best political system is one in which as many people as possible have a share in decision making and responsibilities. Freedom of choice in politics and other related matters, and individual value are also basic to democracy. Democracy recognizes personal freedom and the right to make your own choices as being important. Democracy means that people know what is best for themselves.

CANADIAN DEMOCRACY

Canada is a democracy and a constitutional monarchy. Our head of state is the Queen of Canada, who is also Queen of Britain, Australia and New Zealand, and a host of other countries scattered around the world from the Bahamas and Grenada to Papua-New Guinea and Tuvalu. Every act of government is done in the name of the Queen, but the authority for every act flows from the Canadian people.

When the people who framed the basis of our present written constitution, the Fathers of Confederation, were drafting it in 1867, they freely, deliberately and unanimously chose to vest the formal

executive authority in the Queen, "to be administered according to the well understood principles of the British constitution by the Sovereign personally or by the Representative of the Queen." That meant responsible government, with a Cabinet responsible to the House of Commons, and the House of Commons answerable to the people. All of the powers of the Queen are now exercised by her representative, the Governor General, except when she is in Canada.

The Governor General, who is now always a Canadian, is appointed by the Queen on the advice of the Canadian Prime Minister and, except in very extraordinary circumstances, exercises all powers of the office on the advice of the Cabinet (a council of Ministers), which has the support of a majority of the members of the popularly elected House of Commons.



(The Peace Tower that stands 90 m above the Centre Block on Parliament Hill was built as a memorial to the Canadians who were killed during the First World War, 1914 to 1918.)

HISTORY OF DEMOCRACY IN CANADA

Nova Scotia (which, till 1784, included what is now New Brunswick) was the first part of Canada to secure representative government. In 1758, it was given an assembly, elected by the people. Prince Edward Island followed in 1773; New Brunswick at its creation in 1784; Upper and Lower Canada (the predecessors of the present Ontario and Quebec) in 1791; and Newfoundland in 1832.

Nova Scotia was also the first part of Canada to win responsible government: government by a Cabinet answerable to, and removable

by, a majority of the assembly. New Brunswick followed a month later, in February 1848; the Province of Canada (a merger of Upper and Lower Canada formed in 1840) in March; Prince Edward Island in 1851; and Newfoundland in 1855.

By the time of Confederation in 1867, this system had been operating in most of what is now central and eastern Canada for almost 20 years. The Fathers of Confederation simply continued the system they knew, the system that was already working, and working well.

A FEDERAL STATE

Canada is not only an independent sovereign democracy, but is also a federal state, with 10 largely self-governing provinces and three territories controlled by the central government. A federal state is one that brings together a number of different political communities with a common government for common purposes, and separate "state" or "provincial" or "cantonal" governments for the particular purposes of each community. The United States of America, Canada, Australia and Switzerland are all federal states. Federalism combines unity with diversity. It provides, as Sir John A. Macdonald, Canada’s first Prime Minister, said, "A general government and legislature for general purposes with local governments and legislatures for local purposes."

The word "confederation" is sometimes used to mean a league of independent states, like the United States from 1776 to 1789. But for our Fathers of Confederation, the term emphatically did not mean that. French-speaking and English-speaking alike, they said plainly and repeatedly that they were founding "a new nation," "a new political nationality," "a powerful nation, to take its place among the nations of the world," "a single great power." They were very insistent on maintaining the identity, the special culture and the special institutions of each of the federating provinces or colonies. The provinces dared not remain separate, nor could they merge. They could (and did) form a federation, with a strong central government and Parliament, but also with an ample measure of autonomy and self-government for each of the federating communities.

THE CONSTITUTION

A democratic constitution, such as we have in Canada, is a body of basic rules that the government of the day cannot change without following a

detailed prescribed procedure. A democratic constitution is merely a set of rules that governs the people. It is also a device to ensure that the state remains an instrument for furthering common interests.

The *Constitution Act, 1867*, remains the basic element of our written constitution. But the written constitution, the strict law of the constitution, even with the latest addition, the *Constitution Act, 1982*, is only part of our whole working constitution, the set of arrangements by which we govern ourselves. It is the skeleton; it is not the whole body.

Our written constitution, unlike the American, is not a single document. It is a collection of 25 primary documents outlined in the *Constitution Act, 1982*: 14 Acts of the British Parliament, seven of the Canadian, and four British orders-in-council. The core of the collection is still the *Constitution Act (British North America Act)* of 1867. This, with the amendments added to it down to the end of 1981, did 12 things.

- First, it created the federation, the provinces, the territories, the national Parliament, the provincial legislatures and some provincial Cabinets.
- Second, it gave the national Parliament power to create new provinces out of the territories, and also the power to change provincial boundaries with the consent of the provinces concerned.
- Third, it set out the power of Parliament and of the provincial legislatures.
- Fourth, it vested the formal executive power in the Queen, and created the Queen's Privy Council for Canada (the legal basis for the federal Cabinet).
- Fifth, it gave Parliament power to set up a Supreme Court of Canada (which it did, in 1875).
- Sixth, it guaranteed certain limited rights equally to the English and French languages in the federal Parliament and courts and in the legislatures and courts of Quebec and Manitoba.
- Seventh, it guaranteed separate schools for the Protestant and Roman Catholic minorities in Quebec and Ontario. It also guaranteed separate schools in any other province where they existed by law in 1867, or were set up by any provincial law after 1867. There were special provisions for Manitoba (created in 1870), which proved ineffective; more limited

guarantees for Alberta and Saskatchewan (created in 1905); and for Newfoundland (which came into Confederation in 1949), a guarantee of separate schools for a variety of Christian denominations.

- Eighth, it guaranteed Quebec's distinctive civil law.
- Ninth, it gave Parliament power to assume the jurisdiction over property and civil rights, or any part of such jurisdiction, in other provinces, provided the provincial legislatures consented.
- Tenth, it prohibited provincial tariffs.
- Eleventh, it gave the provincial legislatures the power to amend the provincial constitutions, except as regards the office of Lieutenant-Governor.
- Twelfth, it gave the national government certain controls over the provinces: appointment, instruction and dismissal of Lieutenant-Governors; disallowance of provincial Acts within one year after their passing; and, power of Lieutenant-Governors to send provincial bills to Ottawa unassented to.

The final British Act of 1982, the *Canada Act*, provided for the termination of the British Parliament's power over Canada and for the "patriation" of our constitution. Under the terms of the *Canada Act*, the *Constitution Act, 1982*, was proclaimed in Canada and "patriation" was achieved.

EO 412.06 THE STRUCTURE OF THE CANADIAN GOVERNMENT

As a resident of a democratic country, you are free to have your own political ideas. You are free to express your opinions and to agree or disagree with the ideas of others; you are free to join with others for political action.

A Canadian citizen has the right to vote in democratic elections and to run as a candidate for political office. Those who vote choose the people who oversee the daily work of government and make our laws – laws that affect the lives and rights of everyone in Canada.

The rights of Canadians are embodied in various laws. For example, civil and criminal laws indicate people's rights during court procedures.

In addition, all the provinces, the territories, and the Federal Government have various human rights legislation.

It is not the laws themselves, however, that guarantee your rights. Your best guarantee of your rights is your active interest and involvement in the making and changing of laws. You must share your ideas with others and convince your political representatives to put forward your ideas. People often disagree over what the law means, or over which new laws are needed. Some disagreements disappear as people discuss and change their views. Others are resolved by decisions of the law courts. All of these are aspects of Canada's political life.

STRUCTURE

There are 3 levels of government in Canada:

a. Federal;
b. Provincial or Territorial; and,
c. Municipal.

The municipal governments are responsible for such things as the zoning by-laws, street maintenance, community services, water management and municipal taxes. The provincial or territorial governments are responsible for such areas as education, child welfare, highways and health care. The Federal Government is responsible for citizenship, foreign policy, postal services, defence and currency.

THE FEDERAL GOVERNMENT AND PARLIAMENT

Canada has a system of parliamentary government. Parliament has three parts:

a. The Queen – Governor General, Queen's representative in Canada;
b. The House of Commons – Canadians elect representatives called MP’s; and,
c. The Senate – chosen by the Prime Minister and appointed by the Governor General.

An important characteristic of the Canadian Government is that it is a representative government. It would be impossible for every person living in Canada to take an active part in the daily conduct of public affairs. Instead, citizens elect representatives from their area to present

their ideas to Parliament. These representatives take up their positions in the House of Commons where they must account for their actions.

A second characteristic of the Canadian Government is its responsibility to those who have elected them. If the Prime Minister and Cabinet cannot hold the confidence and support of the majority members of the House of Commons then they are expected to resign. A new election is required in order to form a new government.

The federal Parliament has power "to make laws for the peace, order and good government of Canada," except for "subjects assigned exclusively to the legislatures of the provinces.

The Federal Government has three branches:

a. **Executive Branch.** The executive branch consists of the Governor General, the cabinet, and the public service. The executive branch is the branch that executes the wishes of the people as expressed by Parliament;
b. **Legislature Branch.** The legislative branch is the law-making part of the government. It is the legislative branch that passes the acts which give the executive branch the authority for governing the country. The legislative branch consists of the Senate and the House of Commons. The legislative branch expresses the desires of the people through its legislation; and,
c. **Judicial Branch.** An important feature of Canadian democracy is the rule of supremacy of law. This means that the government itself is controlled by law and must act according to its terms. The Prime Minister, a public servant or a police officer is subject to the law of the land in the same way as every other citizen.

PROVINCIAL AND TERRITORIAL GOVERNMENT

Every province has a legislative assembly that is very similar to the House of Commons and transacts its business in much the same way. All bills must go through three readings and receive Royal Assent by the Lieutenant-Governor. Members of the legislature are elected from constituencies established by the legislature roughly in proportion to population, and whichever candidate gets the largest number of votes is elected, even if his or her vote is less than half the total.

The provincial legislatures have power over:

a. direct taxation in the province for provincial purposes;
b. natural resources;
c. prisons;
d. charitable institutions;
e. hospitals;
f. municipal institutions;
g. licences for provincial and municipal revenue purposes;
h. local works and undertakings;
i. incorporation of provincial companies;
j. solemnization of marriage;
k. property and civil rights in the province;
l. the creation of courts and the administration of justice;
m. fines and penalties for breaking provincial laws;
n. matters of a merely local or private nature in the province; and,
o. education.

What is the difference between a territory and a province? A province exists in its own right, a creation of the *Constitution Acts, 1867 – 1982*. A territory, however, is created through federal law. As a result, Crown lands in the territories are retained by the federal government. This differs from the provinces, which own provincial lands. Secondly, in a territory, federal Parliament may enter into provincial-type affairs, such as school curriculum. Thirdly, territorial governments are not included in the Constitutional amending formula — the way we decide if we want to change something in the Canadian Constitution. Provinces get a vote when a change is proposed — territories do not.

MUNICIPAL GOVERNMENT

Municipal governments — cities, towns, villages, counties, districts, metropolitan regions — are set up by the provincial legislatures, and have such powers as the legislatures see fit to give them. Mayors, reeves and councillors are elected on a basis that the provincial legislature prescribes.

There are now close to 5,000 municipal governments in the country. They provide us with such services as water supply, sewage and garbage disposal, roads, sidewalks, street lighting, building codes, parks, playgrounds, libraries and so forth. Schools are generally looked after by school boards or commissions elected under provincial education Acts.

EO 412.07 LIST DATES WHEN THE TEN PROVINCES AND THREE TERRITORIES JOINED CONFEDERATION

BEFORE PROVINCES AND TERRITORIES

Aboriginal peoples are thought to have arrived from Asia between 30 000 and 10 000 BC, by way of the Bering Land Bridge, an icy land bridge between Siberia and Alaska. Some of them settled in Canada, while others continued south.

The culture and features of these first peoples changed as the gradually warming climate melted the glaciers and large mammals like the mammoth became extinct. By the time of the first European contact there were several distinct groups of first peoples.

Woodland – there were eight principal tribes of Woodland First Nations, all of whom spoke languages belonging to the Algonkian family. The now extinct Beothuk lived in Newfoundland, while the Mi'kmaq occupied Nova Scotia, northeastern New Brunswick, Gaspé in Quebec, and Prince Edward Island. Southwestern New Brunswick and the neighbouring part of Quebec were the home of the Malecite.
The Montagnais and Naskapi lived in what is now Quebec and Labrador. The Montagnais occupied the heavily wooded area along the north shore of the St. Lawrence as far east as Sept-Iles. The tundra-like lands of the Naskapi extended far into northeastern Quebec. The Ojibway occupied a large territory encompassing all the northern shores of Lake Huron and Lake Superior from Georgian Bay to the edge of the Prairies, and to the height of the land north where the rivers begin to flow towards Hudson Bay. The Algonquin lived in the Ottawa Valley. The Odawa lived mainly on Manitoulin Island in the northern Lake Huron, Georgian Bay area.
Flanking the Ojibway on the north and west, the Cree also occupied an immense area. They lived on the southern perimeter of Hudson Bay, as far north as Churchill. Their territory was bounded on the east by Lake Mistassini and extended all the way west to the Prairie frontier.

Southwestern Ontario – there were nine principal Iroquoian tribes. All of them spoke languages belonging to the Iroquoian language family. The Huron lived between Lake Simcoe and Georgian Bay. To the south and west were their allies, the Tobacco Nation (also called the Petun). Further south still on the Niagara Peninsula lived the

Neutral. The villages of the Erie tribe bordered on the southern shoreline of the lake which has their name. South of Lake Ontario and extending to the upper St. Lawrence River was the land of the Iroquois, a confederacy of five tribes: the Mohawk, the Oneida, the Onondaga, the Cayuga and the Seneca. In 1722 the Iroquois confederacy was joined by a sixth tribe – the Tuscarora.

Plains – there were eight principal tribes of First Nations who inhabited Canada's plains. Of these, the Blackfoot, Blood, Peigan, Gros Ventre and Plains Cree spoke languages belonging to the Algonkian language family. The Assiniboine and Sioux spoke languages belonging to the Siouan family. The Sarcee spoke an Athapaskan language. The Blackfoot (or Siksika) had territory east of the Rocky Mountains in the high plains where Edmonton and Calgary are now. The Blackfoot, together with the Blood and the Peigan, formed a powerful alliance. The Blood lived to the southwest of the Blackfoot, close to the foothills of the Rockies. The Peigan lived south of the Blood, in the regions now known as Lethbridge and Medicine Hat. Before 1800, the Gros Ventre lived east of the Peigan. The country of the Plains Cree stretched across the northern fringe of the plains, south of the Churchill River to the eastern edge of Blackfoot territory. The Assiniboine occupied all the area south of the Plains Cree, from the eastern plains to Blackfoot country. The Sioux (or Dakota) were a large confederacy scattered over the American plains and the Canadian West. Today, several hundred Sioux live on reserves in Manitoba and Saskatchewan. They are the descendants of refugees who came to Canada under the leadership of Sitting Bull after the defeat of the American cavalry at Little Bighorn in 1876. The Sarcee, who came from the north by way of Lesser Slave Lake, lived along the upper part of the Athabasca River, northwest of the Blackfoot.

Plateau – six principal tribes occupied the varied plateau area of interior British Columbia. The Interior Salish was the largest of these tribes and consisted of five groups belonging to the Salishan language family. The Lillooet tribe lived in the Lillooet River Valley. South and west of them was the Thompson First Nation, who occupied the Fraser River Valley from Yale to Lillooet. The most northerly and largest of the groups was the Shuswap, who controlled the Fraser River from Lillooet to Alexandria and east to the Rocky Mountains. The most southerly was the Okanagan, who lived in the Okanagan River Valley. To their east around the Arrow Lakes and the upper Columbia River lived the Lake First Nation. Until about 1750, the Kootenay tribe lived

east of the Rockies on the Prairies. Driven westward over the mountains by the Blackfoot, they came to occupy the southeastern corner of British Columbia. They belonged to the Kootenayan language family. Occupying the headwaters of the Chilcotin River and the Anahim Lake district were the Chilcotin, a tribe belonging to the Athapaskan language family. To their north were the Carrier, who belonged to the same language family. They lived in the large area comprising the valleys of the upper Fraser, Blackwater, Nechako and Bulkley rivers. The third tribe of Athapaskan speakers was the Tahltan, who lived north of the Carrier and controlled the lands of the drainage basin of the upper Stikine River. North of the Tahltan, in the valley of the upper Lewes River, lived the Tagish, who belonged to the Tlingit language family.

Pacific Coast – there were six principal tribes of Pacific Coast First Nations. The most northerly tribe was the Haida, who occupied the Queen Charlotte Islands. They were the only member of the language family called Haida. The Tsimshian, who lived on the mainland coast directly across from the Queen Charlottes, were divided into three groups, all of whom spoke languages belonging to the Tsimshian languagefamily. The Tsimshian lived at the mouth of the Skeena River, the Gitksan lived farther inland along the Skeena, and the Nisga'a at the basin of the Nass River. The southernmost Pacific Coast tribes were the Nootka and the Coast Salish. Occupying the west coast of Vancouver Island, the Nootka spoke a language belonging to the Wakashan language family. The Coast Salish were found on the eastern coast of Vancouver Island and on the mainland just opposite, from Bute Inlet to the mouth of the Columbia River. They spoke languages belonging to the Salishan language family. Between the northern and southern tribes were found the Kwakiutl and the Bella Coola. Like the Nootka, the Kwakiutl spoke a language belonging to the Wakashan language family. They lived on the northern end of Vancouver Island and on the nearby mainland. The Bella Coola lived on the banks of the Dean and Bella Coola rivers and on the fjords into which these rivers flowed. They belonged to the Salishan language family.

Yukon and Mackenzie basin – twelve principal tribes lived in the vicinity of the Mackenzie and Yukon River basins. All these tribes spoke languages belonging to the Athapaskan language family. The Chipewyan ranged from north of the Churchill River all the way west to Great Slave Lake and controlled the largest amount of territory. To the south and west were the Beaver who lived in the basin of the Peace River. The Slave (or Slaveys) ranged from west of Great Slave Lake as far west as the Mackenzie River. The lake-dotted land from the east end of Great Slave Lake to the eastern shore of Great Bear Lake was the territory of the Yellowknife. To their southwest were the Dogrib who occupied the land between these two great northern lakes.
West and northwest of Great Bear Lake lived the Hare. To their west were the Kutchin who occupied the basins of the Pelly and Porcupine rivers, thus taking up much of what is today the Yukon interior. The Han and the Tutchone occupied what is today the southern Yukon.
South of the Tutchone were the Kaska and the Mountain, who lived in the mountainous country to the west of the Mackenzie River. The most southern of the tribes was the Sekani, who dwelt on the eastern slopes of the Rockies in what is now northern Alberta. The homeland of these northern tribes was vast, taking up over one-quarter of Canada's total land mass.

Inuit – could be divided into two closely related groups based on language, environmental factors and certain cultural features. The first is the Yupik who occupied coastal southwestern Alaska, Nunivak and St. Lawrence islands and a small sector of the southeastern Chukchi Peninsula. The Yupik language has the same origin as Inuktitut. The second group included the Inupiat of north Alaska and eastern Russia, the Inuit of Canada, and the Inuit of Greenland.

DATES OF CONFEDERATION

1867	Ontario, New Brunswick, Nova Scotia, and Quebec
1870	Manitoba and Northwest Territories
1871	British Columbia
1873	Prince Edward Island,
1898	Yukon Territory
1905	Alberta and Saskatchewan
1949	Newfoundland,
1999	Nunavut

PROVINCES AND TERRITORIES

Newfoundland – King Henry the VII of England referred to the land visited by Jon Cabot in 1497 as the "New Found Launde." Newfoundland's motto is: *Quaerite Prime Regnum Dei* – "Seek ye first the kingdom of god."



Flag



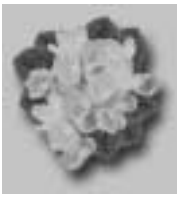
Pitcher Plant

John Cabot landed on the island on June 24, 1497. The Anglo-French colonial wars shaped the history of Newfoundland during the 1600s and 1700s. The Treaty of Utrecht in 1713 reconfirmed British sovereignty over Newfoundland and the fishing banks. In 1832 the people were granted the right to vote for an elected assembly and Newfoundland was given responsible government in 1855. Newfoundland joined confederation March 31, 1949.

Nova Scotia. – was named by Sir William Alexander who, in 1621, received a grant. The charter was in Latin and the name "New Scotland" retained its Latin form – Nova Scotia. It's motto is: *Munit Haec et Altera Vincit* – "One defends and the other conquers".



Flag



Mayflower

In the 17th century, all of Nova Scotia, as well as parts of Quebec, New Brunswick and Maine, which made up an area known as Acadia, was settled by the French. In 1713, all of Acadia, except Cape Breton Island was ceded to the British under the Treaty of Utrecht. In 1848,

Nova Scotia became the first British colony to win responsible government. Nova Scotia joined confederation July 1,1867.

Prince Edward Island – in 1799 it was given its present name, in honour of Prince Edward of England (previously Ile St Jean). PEI's motto is: *Parva Sub Ingenti* – "The small under the protection of the great."



Flag



Lady's-Slipper

Jacques Cartier landed there in 1534. The French established a colony in 1719. In 1769 the Island of Saint John became a separate colony Prince Edward Island joined confederation in 1873.

New Brunswick – was named in 1784 to honour the reigning British monarch King George III. New Brunswick's motto is: *Spem Reduxit* – "Hope was restored."



Flag



Purple Violet

Samuel de Champlain landed in New Brunswick in 1604. In 1713, Acadia was ceded to the British under the Treaty of Utrecht. New Brunswick became a separate province in June of 1784 and joined confederation July 1, 1867.

Quebec – comes from an "Algonquin word meaning "narrow passage" or "strait". Quebec's motto is: *Je me souviens* – "I remember."



Flag



White Garden Lily

Jacques Cartier landed in Gaspe in 1534. Founded in 1608, Quebec City became the capital of New France. New France ceded to British forces in 1763. In 1774, under the Quebec Act, Britain granted official recognition to French Civil Law, guaranteed religious freedom and authorized the use of the French language. Quebec joined confederation July 1, 1867.

Ontario– The origin of Ontario's name has several possibilities: in one, it comes from the Iroquois word "Kanadario" meaning "sparkling water." Alternately, the name may be a variation of the term "Onitariio" which translates to "beautiful lake. " In one or more of the Iroquioan languages, such as Huron, Mohawk and Seneca, the name probably means simply 'a large body of water.' Ontario's motto is: *Ut Incepit Fidelis Sic Permanet* – "Loyal she began, loyal she remains."



Flag



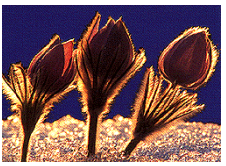
White Trillium

Henry Hudson became the first European to touch the shores of present-day Ontario in 1610. In 1613, Samuel de Champlain and Étienne Brûlé made the first contacts with the Aboriginal people. In 1774 the British ruled over southern Ontario, then part of the British colony of Quebec. Under the Constitutional Act of 1791, "Quebec" was divided in two and Ontario renamed Upper Canada. In 1840, the Act of Union saw Upper and Lower Canada reunited. Ontario joined confederation July 1, 1867.

Manitoba – comes from the Cree words "*Man into wha paow*" which means "the narrows of the great spirit". Manitoba's motto is "*Glorious E Liber*".



Flag



Prairie Crocus

In 1612, Captain Thomas Button wintered two ships at the mouth of the Nelson River. In 1670, the Hudson's Bay Company was created. Louis Riel succeeded in establishing a locally-elected, provisional government in December, 1869. Manitoba joined confederation July 15, 1870.

Saskatchewan – comes from the Cree word "kisiskatchewanisipi" which means "swift-flowing river," and was adapted to the present name in 1882. Saskatchewan's motto is: *Multis E Gentibus Vires* – "from many peoples strength."



Flag



Western Red Lily

Saskatchewan joined Confederation as part of the Northwest Territories in 1870. The Dominion Lands Act of 1872, encouraged homesteaders and immigration and the new railway began bringing settlers in to farm these rich lands. The Province of Saskatchewan joined confederation on September 1, 1905.

Alberta – Alberta was named after Princess Louise Caroline Alberta, fourth daughter of Queen Victoria. When it was named, Alberta was one of four provisional districts of the North-West Territories, and included only part of the present province with the same name. Alberta's motto is: *Fortis et Liber* – "Strong and free".



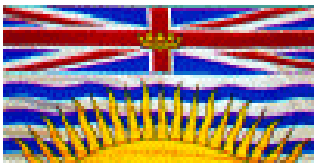
Flag



Wild Rose

The first European explorer was Anthony Henday, in 1754. Peter Pond, of the North West Company, established the first fur-trading post in the area in 1778. Alberta joined confederation in 1905.

British Columbia – the southern region was called Columbia and the central region was called New Caledonia. To avoid confusion The Queen named the area British Columbia when it became a colony in 1858. BC's motto is: *Splendor Sine Occasu* – "Splendor without diminishment."



Flag



Pacific Dogwood

In 1774, the first Europeans, under the flag of Spain, visited what is now British Columbia. The first permanent colony, in present-day Victoria, was established by the British in 1858. Gold was discovered in the lower Fraser Valley in 1857 and thousands of people immigrated. The promise of a rail link between the pacific coast and the rest of Canada convinced British Columbia to join Confederation in 1871.

Yukon Territory – Yukon Territory takes its name from the Loucheux (Gwitchin) Indian name *Yu-kun-ah* for the "great river" which drains most of its area.



Flag



Fireweed

In 1825, John Franklin became the first European to reach the Yukon. Gold was discovered near Dawson City in 1896, and the Klondike became one of the most populous regions in northwestern Canada. It became a separate territory in 1898 with the passage of the Yukon Act.

Northwest Territories – Most of today's Northwest Territories were known as the North-Western Territory until 1870. Now the name describes the location of the territories.



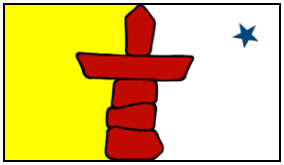
Flag



Mountain Avens

In 1870, the British government transferred control of the North-Western territory to Canada. Ten years later, the British government annexed the islands of the Arctic Archipelago, which also became part of the Territories. In 1905, both Alberta and Saskatchewan were created from the Territories. Finally in 1912, the provinces of Manitoba, Ontario and Quebec were enlarged, fixing the Northwest Territories with a size and shape that remained unchanged until 1999, when Nunavut was established.

Nunavut – means “our land” in Inuktitut, the language of the Inuit, and, unlike the Northwest Territories, the word 'territory' is not part of Nunavut's official name. Nunavut’s motto is: *Nunavut sunginivut* – “Nunavut our strength.”



Flag



Purple Saxifrage

The territory known as Nunavut was established under the Statutes of Canada 1993, Bill C-132 — the *Nunavut Act* . It received royal assent on June 10, 1993. Inuit had made the creation of the territory through this act a prerequisite to signing their land claim. *The Nunavut Land Claims Agreement Act* came into law at the same time as the *Nunavut Act*. Implementation of the Nunavut Land Claims Agreement has been underway since 1993. Nunavut became a territory on April 1, 1999.


CANADA
Nunavut
Yukon Territory
Northwest Territories
Alberta
Manitoba
Ontario
Quebec
Nova Scotia
Prince Edward Island
Newfoundland
Labrador
Alaska
Greenland
Kalaallit Nunaat
Iceland
Russia
Arctic Ocean
Atlantic Ocean
Pacific Ocean
United States of America
CANADA
Nunavut
Territoires du Nord-Ouest
Yukon
Colombie-Britannique
Alberta
Manitoba
Ontario
Québec
Nouveau-Brunswick
Île-du-Prince-Édouard
Nouvelle-Écosse
Terre-Neuve
Labrador
Alaska
Groenland
Kalaallit Nunaat
Islande
Russie
Océan Arctique
Océan Atlantique
Océan Pacifique
États-Unis d'Amérique

EO 412.08: ORGANIZE A CORPS COMMUNITY ACTIVITY AS A MEMBER OF A GROUP

Community activity (sometimes referred to as a citizenship activity) is defined as an organized cadet corps visit into the local community for the purpose of learning about the community or supporting the community in one of its own activities. Remember, Army cadet corps represent the Canadian Forces in communities in every corner of the country.

CHOOSING AN ACTIVITY

There are two reasons for participating in a community activity: to learn something new about the community and/or to assist the local officials with their activities. An example of the first type of community activity is when the cadet corps organizes a visit to city hall to see local government in action. This activity is a learning experience for most cadets as they will not have been previously exposed to municipal politics. An example of the second type of activity is when the cadet corps assists with communications, and/or helps set-up and tear down facilities for a community event.

Community activities that require few resources and can be done in most communities across Canada:

a. collecting new and used toys for the children's hospital;
b. volunteering at a local senior citizen's home;
c. collecting food for your local foodbank;
d. participating in the Terry Fox Run;
e. participating in a Remembrance Day Ceremony;
f. helping distribute Christmas baskets;
g. interpreting at a museum;
h. playing music for a municipal function; or,
i. visiting the local office of your MP/MPP/MLA.

ORGANIZING A COMMUNITY ACTIVITY

Using your planning skills from Gold Star Leadership training, plan a community event in the same way, employing the applicable stages of task procedure. Special considerations for community events are community outreach and public relations.

Community outreach – you may need to contact key members of the community or event planners during your planning stage. Remember that these people may not be familiar with the military structure, so be sure to explain yourself and your plans in terms they understand. Also, there may be other civilian volunteers working with you that you will have to communicate with. Community leaders like Mayors, Reeves, etc. will have specific titles and ways of being addressed in correspondence. Research the proper titles and honours of the person you wish to contact before corresponding.

Corporate funding for your activity may be available from local businesses. Approach them with all the activity information and try to present your request so that the business sees why it will benefit everyone for them to be involved.

Public relations – community activities have the potential of bringing positive public attention to the Army Cadet Program. All efforts should be made to project a good public image both for the community activity and the program in general. The following are considerations for Public Relations (PR) relating to community activities:

a. all photos will depict safe training or activity – all persons in the photo will be employing appropriate safety equipment and practices;
b. photos will only be published with the permission of the person(s) portrayed. Provide the photos with captions, and an interesting angle for a story or a prepared text including the names of the cadets, the photographer, and the corps; and,
c. all text will be proofread for grammar, spelling and accuracy.

You should make every effort to publicize participation in community activities. Make use of all available outlets (newspapers, television, radio, internet, etc.), and encourage your cadets to provide stories and pictures from their point of view about their experiences. The standard way of informing the media about an activity is by faxing them a Media Advisory or Press Release – to be sent at least 48 hours before the event. Offer to provide the appropriate cadet recruiting pamphlet and Backgrounder on the CCO to introduce the Cadet Program to the media.

A media advisory might look like this example for Cadets Caring for Canada:

MEDIA ADVISORY

NAME OF UNIT HERE

City – On Saturday, June 10, 2000, Army cadets from (unit name & number) will be participating in a national environmental initiative, **Cadets Caring for Canada**. On this day, cadets in 1,100 cadet corps and squadrons across Canada will undertake an environmental project in order to improve their local communities. In all, **Cadets Caring for Canada** will have events in 750 communities across the country.

Here at home, Army cadets from (unit) will (describe the project including timings and location). (Give details such as: Are cadets from other units participating? Are there any high profile guests? Are members of the public invited to help out?)

In honour of the millennium year and in recognition of the event's origin, the national launch for **Cadets Caring for Canada** will take place in St. John's, Newfoundland on June 9th. The following day, Saturday June 10th, cadets aged 12 to 18, their leaders and members of the Navy League of Canada, the Army Cadet League of Canada and the Air Cadet League of Canada—70,000 people in all--are expected to participate in environmental and citizenship activities on this day.

Members of the media are encouraged to contact the local Commanding Officer (insert name and phone number) or Local Sponsor (insert name and phone number) for further details about the (name project here). Through **Cadets Caring for Canada**, Canadian youth are helping to keep the *seas, trees and breeze* alive.

Corps contact information.

CADETS CARING FOR CANADA



Cadets Caring for Canada (CCC) began in 1991 when the Royal Canadian Army Cadets of Newfoundland and Labrador decided to get involved by working locally to improve and beautify their community. 1999 was the first year to have national army cadet participation. We will be having this continue as an army cadet tradition to show our support to our communities and Canada

What can I do? You can plant trees, clean up parks, work at local recycling centres, assemble a children's playground set, and build nesting duck boxes, or choose from among hundreds of projects. Some of the projects that have been very successful include stabilizing and refurbishing streams and river banks, preserving and maintaining historic properties and buildings, enhancing the natural beauty of local parks and hiking trails, removing debris from natural and park areas; and supporting sustainable projects such as reforestation.

Cadets, officers, sponsors, parents, members of various leagues and volunteers participate in this activity. Many local businesses, municipal and provincial associations and federal departments are involved in improving our environment through the CCC.

This project further develops in each and every cadet qualities of leadership and an aspiration to become a valued member of his or her community. Through this project you instill active citizenship and promote environmental awareness. It also allows you to develop leadership and become an active and engaged member of your community.

In summary, plan ahead, share the burden of organizing with others and learn from each mistake that you make. Remember that one of the aims of the cadet organization is to develop citizens, and by getting involved in the community, you are contributing to the improvement of that community. Cadets must be good citizens as well as good cadets.



NOTES:

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PO 413 PHYSICAL FITNESS

EO	DESCRIPTION	PAGE
01	Discuss the Army Cadet Fitness Test.	13-2
02	Discuss the components of personal fitness.	13-10
03	Pursue a healthy lifestyle.	13-15
04	Organize a Cadet Corps tabloid sports meet as a member of a group	13-17



INTRODUCTION

The promotion of physical fitness is one of the primary aims of the cadet movement. Physical fitness training, or physical training (PT), in Army Cadets can include:

a. organized PT to develop aerobic and anaerobic fitness;
b. team and individual sports; and,
c. recreational activities.

Being physically fit will allow you to approach activities with confidence and energy, and you'll be better prepared to participate in cadet training. You need to work towards 60 minutes of activity a day, in periods of at least 10 minutes each.

SAFETY

Know your limits – Select and participate in physical activities that you are ready for – in skill, fitness level, and knowledge of the rules. Avoid pushing yourself to a point where you can not back-out safely – e.g. half way up a rock face is not the point to suddenly decide you can not continue.

Prepare – It is good to wait 2-3 hours after a meal before starting a physical activity. Drink water (up to 8 cups a day for the average person), and warm up properly before physical activity. Keep in mind weather, safety equipment and your personal goals when planning to participate.

Hot and cold weather – Reduce the intensity of your workouts and drink more fluids than usual (as you will dehydrate faster) during hot or cold weather. Dress appropriately for the weather – remember wind chill! Avoid strenuous activity above 30ºC or below -20ºC.

EO 413.01: ARMY CADET FITNESS TEST

GENERAL

The Army Cadet Fitness Test (ACFT) will be carried out at your cadet corps each year, and on courses conducted at Army Cadet Summer Training Centres. The purpose of the test is:

a. to raise the standard of fitness of all Army cadets;
b. to motivate cadets to participate in physical activities;
c. to create interest in fitness through the provision of badges for proficiency;
d. to confirm the ability of a cadet to meet the standards of performance for the National Star Certification Examination; and,
e. to prepare cadets to meet standards of fitness for Advanced Training Courses and the Basic Parachutist Course.

The ACFT consists of four events:

a. push-ups;
b. sit-ups;

c. chin-ups; and,
d. a 20m shuttle run.

All exercises must be attempted; push-ups, sit-ups and chin-ups must be continuous.

FITNESS STANDARDS OF THE ROYAL CANADIAN ARMY CADETS

Select a test (Bronze, Silver or Gold) to attempt and then try to achieve the highest possible result in each of the four events. Each result earns a point value, represented on the charts below. Add up your points at the end. Depending on your age and gender, you may have achieved enough points in your test, or the next higher or lower test(s), to earn a fitness badge.

BRONZE TEST/ ÉPREUVE DE BRONZE	5 Point	6	7	8	9
Level for 20m Shuttle Run Niveau Course Navette 20m	4 M 3 F	5 M 4 F	6 M 5 F	7 M 6 F	8 M 7 F
Sit Ups Redressements assis	33 M 27 F	34 M 28 F	35 M 29 F	36 M 31 F	38 M 32 F
Push Ups Extensions de bras	18 M 12 F	20 M 14 F	21 M 15 F	22 M 16 F	28 M 18 F
Chin Ups Tractions à la barre	3 M 1 F	4 M 2 F	5 M 3 F	6 M 4 F	7 M 5 F
SILVER TEST/ ÉPREUVE D'ARGENT	5 Point	6	7	8	9
Level for 20m Shuttle Run Niveau Course Navette 20m	7 M 5 F	8 M 6 F	9 M 7 F	10M 8 F	11M 9 F
Sit Ups Redressements assis	39 M 33 F	40 M 34 F	41 M 35 F	42 M 26 F	43 M 37 F
Push Ups Extensions de bras	24 M 22 F	26 M 21 F	27 M 23 F	29 M 25 F	31 M 26 F
Chin Ups Tractions à la barre	4 M 2 F	5 M 3 F	6 M 4 F	7 M 5 F	8 M 6 F

GOLD TEST/ ÉPREUVE D'OR	5 Point	6	7	8	9
Level for 20m Shuttle Run Niveau Course Navette 20m	8 M 6 F	9 M 7 F	10M 8 F	11M 9 F	12 M 10F
Sit Ups Redressements assis	44 M 39 F	46 M 40 F	48 M 42 F	50M 43 F	53M 47 F
Push Ups Extensions de bras	32 M 28 F	35 M 31 F	39 M 33 F	43 M 38 F	50 M 46 F
Chin Ups Tractions à la barre	5 M 3 F	6 M 4 F	7 M 5 F	8 M 6 F	9 M 7 F

The minimum score to earn a badge in each test is:

a. 12-14 years = Points 20 M, 20 F
b. 15-16 years = Points 24 M, 20 F
c. 17-18 years = Points 28 M, 24 F

WARM UP

Before you start any workout you should always perform a warm up. A good warm-up can take ten or more minutes. It is also good to add additional stretches or exercises such as light jogging, short sprints of increasing speed, hopping or skipping, or light calisthenics. You can perform the same stretches in your cool-down after your workout.

The warm-up is an essential part of every session. A warm-up routine has a number of benefits. Make sure your warm up is at least 10 minutes or more. It is beneficial because:

a. It prepares the body for action**.** It increases heart rate, warms up the muscles, stretches tight connective tissue at the ends of the muscles, and helps lubricate the joints. All this helps the muscles function more efficiently;
b. It helps develop sports skills. Done on a regular basis, stretching and strengthening exercises allow the muscles to work through a wider range so you can play sports comfortably with greater skill; and,
c. It helps prevent injury. Muscles that are supple and strong they become less prone to overstretch and strain.

1. Arm Circles

Full, slow sweeping circles with both arms. Frontwards, then backwards.



2. Side Stretch

Reach one arm overhead and the other down the side of the leg. Repeat alternately to other side.



3. Sit-Reach

One leg straight, one bent with sole of the foot near knee of straight leg. Reach out along straight leg.



4. Cat Back

On all fours, arch, tucking chin to chest and exhaling. Return to flat-back position. Don't sag.



5. Pelvic Tilt

On your back, knees bent, feet flat on the floor. Tighten abdominals and buttocks, and press your lower back firmly against the floor.



6. Cross-overs

Seated, legs in front, knees bent, feet flat on the floor. Roll legs to one side toward the floor. Look over the other shoulder.



7. Curl-up

Flatten lower back to floor, then slowly curl up with straight arms reaching past the knees.



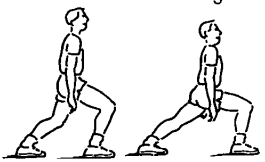
8. Thigh Stretch

Bend one knee, grasp ankle, pull foot gently toward the buttock. Repeat alternately with the other leg. Don't arch your back.



9. Calf Stretch

One foot in front of the other and feet pointing straight ahead, bend both legs (squatting) to stretch the soleus muscle in the rear leg. Repeat with legs further apart and back leg straight to stretch the calf muscle in the rear leg.



To get these benefits, you must warm up properly. Here are some guidelines for a warm-up session:

a. Start with three minutes of brisk walking or easy jogging;
b. Do your stretching exercises slowly and smoothly, with no bouncing or jerking. Quick, bouncing movements can cause injury;
c. Stretch only until you feel tightness. If you feel pain, you are stretching too far;
d. Do strengthening exercises at a controlled speed. If they are done too quickly, poor technique may result and the risk of injury is increased;
e. Breathe naturally, inhaling and exhaling fully on each repetition. Breath holding should be avoided. It can cause dizziness or faintness, and it puts greater demands on the heart; and,
f. Arm Circles, Curl and Stretch and Ankle Rocker require gentle, continuous action. For the other stretching exercises, use a stretch-and-hold movement. Start with a minimum of five repetitions, holding the stretched position for at least 10 seconds. Later, you can do a few repetitions, but maintain the stretched position for 20 seconds or longer.

WATER AND FOOD

You need to keep your body supplied with the fuel required to keep it going. Water is essential to activity. Always drink water before beginning an activity, and be sure that you have water available to you during the activity. Drink slowly and in small amounts regularly, rather than large gulps once in a while. Eat a well balanced diet, including carbohydrates 8-12 hours before activity. Avoid eating large meals immediately before activity.

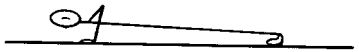
COOL-DOWN

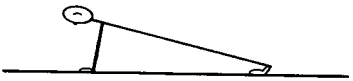
Stretching exercises play an important role in the cool-down following an activity session. A cool-down (warm up done in reverse order) brings the heart rate and body temperature back to normal, and it helps prevent unnecessary stiffness and soreness that can result from vigorous activity.

PUSH-UPS

Lie flat on your stomach with your legs together and your hands pointing forward, positioned under your shoulders. Push up from the

floor by straightening and locking your elbows and using your toes as a pivot point. Your body must be kept in a straight line. Return to the starting position, upper arms parallel to the floor. Count the initial push-up as “one” and other each repetition successfully completed.





SIT-UPS

Lie on your back with your knees bent at a right angle and feet about 30 cm apart.

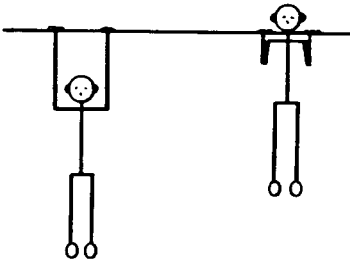
Place your hands beside your head and keep them in this position. You can have someone hold your ankles. Touch your knees with your elbows, count “one”, and return to the starting position. Ensure your shoulder blades return to their initial position each time.



CHIN-UPS

The test starts with you hanging from the bar, using an undergrasp grip (palms towards you), keeping your arms and body straight. You know your arms are straight when your elbows touch your ears.

To start, bend your arms, pulling your body up without kicking or swinging, until the bottom of your chin touches the bar and count “one”. Extend your arms and lower your body to the start position and repeat.



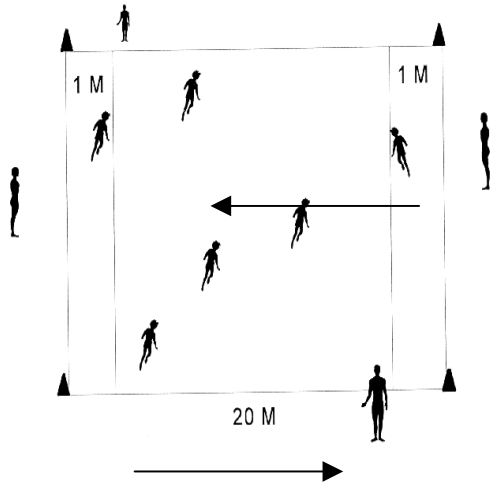
20 METERS SHUTTLE RUN (20 MSR):

The 20 MSR is a test that gets progressively more difficult. It emphasizes safety and gives a very accurate reading of aerobic fitness.

Pylons and/or tape are used to mark out the 20-metre course on the floor and to indicate the 2 stride zones. The evaluation starts at the walk-jog pace of 8.5 km/hr and increases .5 km/hr for each one-minute stage thereafter. The maximum length of the test is twenty minutes. Ask your instructor for a demonstration if you don't understand.

Stand behind the outside-line. When the tone of the tape sounds, run across to the other side. Once you enter the other stride zone, turn around and wait for the next tone of the tape. Complete as many stages as you can.

The 20 MSR may be terminated if you stop, you cannot reach the stride zone before the tone twice in a row, or if the instructor becomes concerned about your safety.



SPORTSMANSHIP

A person who displays good sportsmanship is fond of sports and behaves fairly and generously. Sportsmanship is an attitude and it should be part of everyone's sports gear when they head out to play. Here are some tips to help you practice good sportsmanship, whatever sport you play:

a. always play by the rules of the game;
b. respect all the referee's decisions without grumbling;
c. accept that your opponents played well and deserved to win;
d. accept victory with humility and modesty;
e. compliment your opponent on his/her play;
f. do not try to gain unfair advantage over your opponent;
g. do not try to win by cheating;
h. remain in control of your emotions and do not resort to violence; and,
j. remember that it is not who won or lost, but how you played the game.

EO 413.02: DISCUSS THE COMPONENTS OF PERSONAL FITNESS

FITNESS

Aerobic fitness measures how well our hearts, lungs, and muscles carry and use oxygen while we do non-stop physical activities. Aerobic activities can help our fitness and endurance. Such activities can include swimming; cycling and running. Improvements in aerobic activity are often measured by recording our pulse rate before and after an endurance activity. As our aerobic endurance improves, our pulse rates lower.

Anaerobic fitness is muscular strength and endurance. Muscular strength is how hard or how far we can move our bodies or an object once. Muscular endurance is how long we can repeatedly move our bodies or an object.

ACTIVITY



Endurance Activities – help your heart, lungs and circulatory system stay healthy and give you more energy. They range from walking and household chores to organized exercise programs and recreational sports.

Flexibility Activities – help you to move easily, keeping your muscles relaxed and your joints mobile. Regular flexibility activities can help you to live better, longer, so that your quality of life and independence are maintained as you get older. Flexibility activities include gentle reaching, bending, and stretching of all your muscle groups.

Strength Activities – help your muscles and bones stay strong, improve your posture and help to prevent diseases like osteoporosis. Strength activities are those that make you work your muscles against some kind of resistance, like when you push or pull hard to open a heavy door.

DEVELOPMENT

Physical activities that increase your fitness are designed around these guidelines:

a. **Progression** – the principle of progressive overload – increase the demands of an activity (duration and intensity) gradually over a period of time;
b. **Specificity** – the effects of activity are specific to the types of training done: running improves aerobic fitness; medicine ball exercises improve co-ordination, agility, and strength; and so on;
c. **Consistency** – it is important to exercise regularly. Studies show that, for fitness improvement, three times a week is twice as good as two times a week; and,
d. **Flexibility** – Inclement weather (heat and humidity or extreme cold), facility conflicts, or other factors may cause you to miss or modify sessions. Try to stick to a routine, but be flexible and improvise whenever necessary.

Sticking with it:

a. train with a friend or listen to music;
b. record your workouts and progression on a daily chart;
c. vary your routine, and,
d. challenge yourself to do better.

VARIETY

Participate in as much physical activity as your schedule allows; team sports, personal fitness training, pastimes, or simply being active in everyday activities – walk to school, take the stairs, etc.



Even if you are specializing in one sport, studies show that risk of repetitive injuries decrease, and overall development increases when activities are varied. Allow your body sufficient time in between sessions and activities to recover. Never continue when you are injured.

Example activities (if you want specific information on a personal fitness program consult a professional with a *Personal Fitness and Lifestyle Consultant*, or *Personal Fitness Consultant* qualification).

Walking jogging and hiking– remember to stretch your whole body – especially your sides, lower back, groin and legs – prior to starting. This activity takes little equipment to do. Select a pair of shoes or boots designed for your activity, and you are off. Your community will probably have fitness, nature or hiking trails available for recreational use. There may also be a walking, running, hiking or long-distance walking club in your community

Cycling and stationary cycling – as always, you must think safety. An approved helmet is essential for all outdoor biking activities. A thorough stretch of the whole body is needed – especially shoulders, sides, lower back and legs. This activity is excellent for aerobic endurance and muscle conditioning. Depending on the type of cycling that you want to do, you may need a particular type of bike – touring, a mountain, racing etc. – get advice at your local specialty bike store, not at the all purpose store which sells more than bikes. Look for approved bike trails and avoid wet conditions where your bike will damage the trails.

Swimming – excellent aerobic and muscle conditioning exercise. Always swim where there is a qualified lifeguard and never swim alone. Stretch all your body remembering shoulders and chest. Avoid using one swimming style continuously. When swimming in open water, have a safety boat follow you and wear a bright coloured swimming cap.

Self-defence – builds self-confidence, provides you with a aerobic and muscular workout and can help improve your self-dignity and self-worth. Self-defence is derived from several martial arts. There are hundreds to choose from here are two examples:

a. Yoshinkan Aikido – relies on timing, balance and control rather than speed and strength. Good for dexterity, endurance and understanding body mechanics; and,
b. Brazilian Jiu-jitsu – relies on balance and control, excellent aerobic and muscular endurance workout.

When looking for a self defence/martial arts club, ask the instructor if they have a teaching license, and do they allow you to come and watch and try a class for free, to see if this type is for you. Do not be pressured into signing up for a year, take the one month package to see if you like it, then decide.

Rope skipping and calisthenics – are good aerobic activity. They will improve agility, coordination and develop muscles. Little equipment and space required.

Cross-country skiing, skating and snow shoeing – are very high aerobic activities that improve balance, agility and muscle development. Safety outdoors is a high concern – dress warmly and

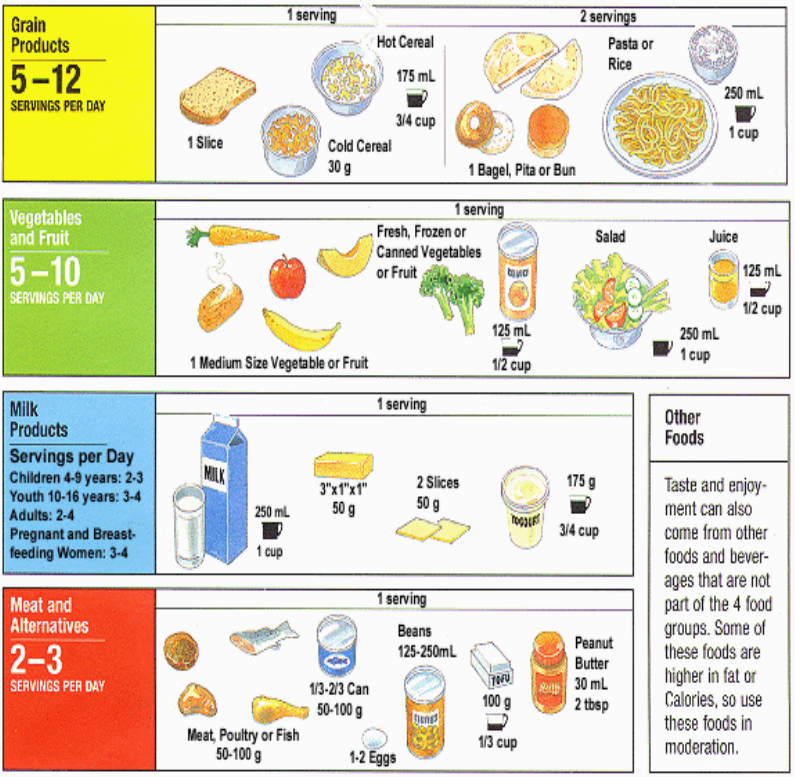
beware of cold weather related injuries (frostbite, snow-blindness). Remember to stretch for these activities. Take a course or program to help in the development of skill. Skiing and snow shoeing can be used for wilderness expeditions.



Biathlon is an excellent sport for developing overall fitness. The Army Cadet Program supports biathlon competitions in your area – there may be support available for your corps' team.

EO 413.03: PURSUE A HEALTHY LIFESTYLE

FOOD



Variety – select foods from all 4 food groups daily. Reduce or eliminate your consumption of processed food products, fast food and junk food. There are also other foods that can be used as meat and dairy alternatives if you prefer a vegetarian or vegan diet.

Carbohydrates – are the best source of energy for physical activity. Get them from enriched and whole grain breads, pasta, cereals, and fruits and vegetables.

Fats – beware of the fat content in food. While your body can accept some fat intake, it is quickly stored and becomes difficult to use up or get rid of!

Protein – is found in meats, eggs, cheese, soy products, nuts, etc. A balanced diet contains enough protein for an average active person.

Supplements – with proper nutrition, you do not need vitamins, minerals or other supplements. Supplements for weight loss or muscle development are usually much less effective than a balanced diet combined with regular activity.

Eating and sleeping – the human body requires energy and rest to perform at its peak. Balanced meals and about 8 hours sleep will give you what you need to perform and improve.

DRUG AND SMOKING POLICY

Cadet regulation on drugs and smoking: Any involvement with illegal drugs, prohibited substances, or drug-related paraphernalia will not be tolerated. Incidents involving cadets and drugs will be referred to local authorities for prosecution and you will be released from the Canadian Cadet Organization. Smoking is discouraged for all cadet members. Smoking is prohibited in all DND buildings, and during all instruction periods.

Smoking affects the body in many ways. It narrows the blood vessels and puts added strain on your heart, shortness of breath (3 times more than non-smokers), makes your hair and clothes stink, stains teeth and causes bad breath. Most people once they start smoking they can't quit, it becomes addictive. There are many more added health risks. Do not waste your money on tobacco. Spend it on new clothes, CD's, movies and going out.

Drug use has the same hazards as smoking but the health risks are greater. Damage and loss of brain cells, respiratory problems, overdose and death are some of the main factors. Do not start using, start refusing! Let people know that you do not want any part of drugs.

EO 413.04: ORGANIZE A CADET CORPS TABLOID SPORTS MEET AS A MEMBER OF A GROUP

INTRODUCTION

A tabloid sports meet constitutes an effective and enjoyable method of involving a large number of cadets in a low-level competition. Tabloid sports meets can be used as motivators for the average performers because they offer them a reasonable chance of reaching a recognized standard of proficiency.

Tabloid sports meets have a definite place in the total RCAC sports programme, particularly at corps level, for they offer the following advantages over high-level competitions:

a. a large number of cadets can participate at the same time;
b. one meet provides the cadets with an opportunity to participate in a wide variety of activities;
c. the meet can be designed around existing facilities and equipment, therefore minimizing the requirement for additional supporting resources; and,
d. the emphasis is placed on team effort rather than on high-calibre performance by a small number of cadets.

As an organizer of a tabloid sports meet, you should understand the following principles:

a. the activities involved will depend on the type of meet, the amount of equipment and the facilities available;
b. each team must consist of the same number of competitors;
c. each event should take approximately the same time to complete;
d. all events take place simultaneously with all teams competing in every round;
e. the number of teams should be equal to the number of events. When this is not possible, there must be more events than teams and certain events must remain "floating" during each round;
f. upon completion of the event, the competitors remain with the event official until the whistle is blown, at which time all teams rotate under direction of their team captain in accordance with the pre-arranged schedule;
g. the number of attempts at each event is limited and normally there are only two performance standards, as explained below; and,

h. it is a good idea to conclude the tabloid sports meet with a team relay race. The placing in the relay race can then be used to decide any ties in the final meet standings.

PERFORMANCE STANDARDS

In a tabloid sports meet, the objective for each competitor is to achieve the predetermined performance standard in every event, rather than to aim for the best personal performance. Two standards are normally set for each event:

a. **Low (single) standard.** This standard should be set so that approximately 75 per cent of the participants are able to achieve it. Competitors who achieve the single standard score one point for their team.

b. **High (double) standard.** This standard must be difficult enough so that only about 25 per cent of the participants are able to achieve it. Competitors who achieve the double standard score two points for their team.

The standards may be set without pre-testing if the organizer is familiar with the calibre of performance of the group. As an alternative, a small group of 8 to 12 cadets selected at random should be pre-tested in every event and the two standards should then be established on the basis of their performance using the criteria stated in paragraph 5, eg, twelve high jump results were as shown below:

Bottom 25 %	No. 1	No. 2	No. 3			
	100 cm	105 cm	110 cm			
Middle 50 %	No. 4	No. 5	No. 6	No. 7	No. 8	No. 9
	115 cm	120 cm	125 cm	125 cm	125 cm	130 cm
Top 25 %	No. 10	No. 11	No. 12			
	140 cm	150 cm	165 cm			

The standards would be, *single* – 115 cm and *double* – 140 cm.

OFFICIATING AND SCORING

The organizer must ensure that each event is controlled by one official who remains with the same event throughout the meet. The official's duty is to ensure that the competitors observe the rules set for the event. At the conclusion of each round, the event official completes the team scoring slip and sends it to the recorder's desk.

The recorder transfers the information from the team scoring slips to the meet recording chart. The team that accumulates the highest total score is declared the winner. If a tie should occur, the team that placed better in the relay race (or key event) is awarded the higher standing.

Officials and coaches are an integral part of any sport. The primary role of the official is to conduct and control the game in a competent and confident manner. To reduce the number of unwanted incidents officials should have a good understanding of the rules and officiate to the best of their ability.

Keys to good officiating are:

a. be prepared – know the rules, set up the playing area, inspect all the equipment;
b. be professional – be fair and diligent in penalizing players, do not argue with other participants or spectators, remain calm and don't let distractions or undisciplined play progress into something worse; and,
c. be where the action is – officiate from the best possible vantage point, and when required move with the action.

TYPES OF MEETS

You could be asked to help organize many different types of tabloid meets, e.g.:

a. athletic events tabloid;
b. military events tabloid;
c. novelty events tabloid; and,
d. minor team games tabloid.

ATHLETIC EVENTS TABLOID MEET

This type of meet allows for maximum participation by average performers in a number of track-and-field events. The size of the teams and the number of attempts allowed each competitor should be arranged so that each event can be completed in 10 to 15 minutes. The simplified rules for the various events that can be selected are explained below.

Running Events:

a. three officials are required, a starter, a finish judge and a timekeeper;
b. distances up to 800 m should be run in heats of four to six competitors; and,
c. the timekeeper should stand behind the finish judge at the finish line and tap the judge on the shoulder when the times set for the double and single standard expire. On the basis of this signal, the judge must then decide which competitors crossed the finish line within the respective standard.

High jump:

a. two officials are required: the judge, who directs the event, and one pit attendant who rakes the pit and replaces the bar;
b. each competitor has only two attempts;
c. the bar is first set at the lower (single) standard. The competitors who fail the first trial may attempt the single standard again or select to take their second attempt when the bar is raised to the higher (double) standard height;
d. the competitors may elect not to attempt the lower standard and have two attempts at the higher standard;
e. when all attempts at the lower standard have been completed, the bar is raised to the higher standard and the participants complete their remaining attempts; and,
f. the judge must keep an accurate record of trials taken by each competitor to ensure that no one gets more than two attempts.

Long jump:

a. two lines indicating the single and double standards are marked across the landing pit;
b. two officials are required, one at the take-off board and one at the side of the pit near the lines denoting the standards;
c. each competitor has only two attempts;
d. all competitors who have achieved the double standard on their first attempt are awarded two points;
e. only those competitors who failed to achieve the double standard on their first attempt are given the second trial and then awarded the appropriate amount of points for their best attempt; and,
f. stepping over the take-off board constitutes a failure.

MILITARY EVENTS TABLOID MEET

This type of meet allows for maximum participation in a number of physical fitness and related military skills conducted in a competitive spirit. Some of the typical events that can be included in a military tabloid meet are explained below.

Accuracy Throw:

a. a double circle is marked on the ground. The diameters should be about 0.5 m for the inner circle and 1.5 m for the outer circle;
b. each competitor is allowed a maximum of three throws from behind a line drawn about 6 to 8 m away from the centre of the circles (an overhead lobbing throw should be used);
c. to attain a double standard, the baseball must land (but not necessarily remain) in the inner circle; a single standard is achieved if the baseball lands in the outer circle;
d. if the double standard is attained in less than three throws, no further attempts are required by that competitor; and,
e. one event judge and several baseballs are required.

Moving Ammunition Boxes or Sandbags:

a. two lines are drawn 5 to 10 m apart. Three to five partially full ammunition boxes/sandbags are piled behind one line;
b. the first competitor moves the pile behind the second line, carrying one box or sandbag at a time;
c. the second competitor returns to boxes/sandbags to their original position, and so on;
d. the times for single and double standards must be determined by a preliminary trial since both will depend on the number of boxes/sandbags in the pile and the distance over which they are carried; and,
e. one event judge with a stopwatch is required.

The Four-Hand Seat Carry:

a. this event involves the regular four-hand seat carry, which you learned during your First Aid Course, over a predetermined distance;
b. participants form groups of threes of approximately the same weight and height;
c. one or more teams can be timed simultaneously, depending on the distance and time available;

d. on completion of the first leg, team members rotate and run each successive leg;
e. the times for single and double standards must be determined by a preliminary trial because both will depend on the distance to be covered; and,
f. one judge with a stopwatch is required.

Rope Climbing:

a. a tape indicating 5 m above ground level is placed on each climbing rope;
b. the competitor stands at attention, facing the rope, and on a given signal jumps up and, using any method, climbs up the rope to touch the mark;
c. if more than one rope is used at the same time, one judge with a stopwatch is required for each rope; and,
d. suggested standards: 8 seconds for a double standard, and 12 seconds for a single standard.

Agility Run:

a. it is formally started with the commands "ON YOUR MARK" and "GO";
b. on the command "ON YOUR MARK", the cadet adopts the starting position behind the start line:
 (1) face down with chest touching the floor;
 (2) hands at the sides of the chest behind the starting line;
 (3) legs fully extended; and,
 (4) head and shoulders may be over the starting line,
c. on the command "GO," the cadet starts;
d. the stop watch is started on the command "GO" and stopped as the cadet crosses the finish line; and,
e. one judge with a stopwatch is required.

Short Obstacle Course:

a. this event involves constructing a short course incorporating a number of simple obstacles;
b. the times for single and double standards must again be determined by a preliminary trial; and,
c. one judge with a stopwatch is required.

NOVELTY EVENTS TABLOID MEET

This type of meet is more fun than fitness oriented. The rules of some typical events are explained below.

Basketball Throw:

a. this event involves regular basketball free throws; and,
b. each competitor is allowed a predetermined number of throws to score.

Softball Throw for Target:

a. this event involves attempting to throw a softball to hit a target area as in the grenade throw; and,
b. each competitor is allowed a maximum of three attempts.

Skittle Ball:

a. this event involves attempting to knock down a skittle (bowling pin) by throwing or rolling a volleyball at it from a set distance (eg, 5 m when throwing or 10 m when rolling the ball); and,
b. each competitor is allowed a predetermined number of throws to score.

Ring Toss:

a. this event involves tossing a ring from a set distance so that it slides over a fixed stick, bowling pin or bottle; and,
b. each competitor is allowed a predetermined number of throws to score.

Scoring Goals:

a. this event involves throwing or kicking a ball or shooting a puck into an appropriate goal; and,
b. each competitor is allowed a predetermined number of throws to score.

Memory Test:

a. a number of objects are placed on a table and covered from view;
b. on a given signal they are exposed to the whole team for one or two minutes, depending on the number of objects involved;
c. the competitors then have a set time to write down as many objects as they can remember; and,
d. one judge with a stopwatch and a supply of paper and pencils is required.

MINOR TEAM GAMES TABLOID MEET

This type of meet provides for maximum participation in a number of enjoyable and simple team games. The following principles are involved:

a. each team must consist of the same number of players;
b. all games are played at the same time;
c. the number of games involved must equal half the number of teams entered (up to a recommended maximum of 10 teams);
d. each game must be of the same duration (10 to 15 minutes). Teams change at half-time and no overtime is played in the case of a tie. There should be a 5- to 10-minute rest between rounds;
e. all teams play in every round. They do not necessarily play each other during the meet, but the draw must be so arranged that the same opponents play only once during the meet; and,
f. two points are awarded for each game won and one point for each draw. The tie-breaking system will be the goals for divided by the goals against.

DUTIES OF THE MEET ORGANIZER

The meet organizer has the following responsibilities:

a. decide on the type of meet, select the activities involved and arrange for advanced publicity;
b. decide how many officials are required, arrange for their availability and brief them on their duties;
c. arrange for the availability of a fatigue/clean-up party;
d. arrange for prizes if any are to be given;
e. arrange for refreshments;
f. arrange for the availability of a load hailer;
g. arrange for seating or enclosure for spectators;
h. notify the competitors of the dress, time and place or reporting;
j. prepare the meet recording chart (see Figure 13-3);
k. see that sufficient team scoring slips are available for each judge;

m. prepare team captain's lists (see Figure 13-10);
n. arrange for availability and check the condition of all equipment required; and,
p. mark out and prepare the area.

METHOD OF CONDUCTING THE MEET

The teams and officials should report to the organizer fifteen minutes before the meet is due to start. The organizer will then:

a. explain the events and their location;
b. explain the system of awarding points and scoring;
c. issue team captain's lists and explain the order of events;
d. explain the method of changing from one event to another. After each team has completed its event, all the members will sit down. When the organizer sees that all teams are sitting down, the signal will be given for teams to change to the next event by blowing a whistle. On this signal, team captains will form up their teams and double to the next event;
e. explain the method of conducting the relay race, after all events have been completed;
f. answer any questions and dispatch the teams and officials to their first event location; and,
g. start the meet and signal the rotation of events as required.

The relay race is held on the completion of all events since it gives each team a chance to compete against the others as a finale. It also gives the recorder a chance to finalize the meet recording chart.

One official will be required on each side of the relay race starting line to ensure that no competitor crosses the line before being touched. One official will also be required on each side of the half-way line, when used, to ensure that competitors cross it before turning back. Infringement of these rules will disqualify the team concerned. The remaining officials should be detailed to look after the order of finish. One official shall be assigned to watch for a specific order of finish only, ie, first, second, third, etc.

At the completion of the relay race, all teams will sit down behind their team captain facing the meet recording chart, and wait for the organizer to announce the final results and present the awards.

Finally, the organizer must ensure that the fatigue party (clean-up party) collects all the equipment and returns it to the sports stores immediately following the conclusion of the meet.



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